

Nick: Welcome to The Hubcast everyone. This is a co-sponsored Podcast brought to you by Michigan State University's Information Technology Department and the Hub for Innovation and Learning in Technology. I'm Nick Noel, an Instructional Designer with MSU. Today on the episode, we're talking about design thinking.

Nick: For those of you who are new to the term, design thinking is a solution focused strategy that seeks to understand users and bring in multiple perspectives.

Nick: We are joined today by Dr. Bill Heinrich of The Hub for Innovation and Learning and Technology, and Dr. Kurt Richter from the Global Center for Food Systems Innovation. They discuss how they use design thinking to teach design thinking in order to assist with capacity building in Malawi.

Kurt: Hi, my name's Kurt Richter, I'm the Deputy Director for the Global Center for Food Systems Innovation at Michigan State University.

Bill: Hi Nick, thanks for having me, I'm Bill Heinrich. I'm the Director of Assessment in The Hub for Innovation and Learning and Technology.

Nick: Cool, sounds like some fun titles you got there.

Bill: They're long. (laughing)

Nick: So to get started why don't we begin with what this project was that you were working on and how it came about.

Kurt: Alright, I'll field that. So the center I work for; The Global Center for Food Systems Innovations, I'll refer to it as its acronym as GCFSI, which I tend to say quickly. We were asked by an organization, Washington D.C. called the United States Agency for International Development, another acronym coming, USAID, they asked us to help spur innovation in a county called Malawi in south eastern Africa. So the first thing we did we started an innovation hub. Had a room, bought some computers, hung up a sign. And about a year into that, we noticed something strange, we had no innovation.

Nick: You mean just building the room didn't do anything (laughing)

Kurt: (laughing) No we missed something in the process. So we quickly learned that the sign and the computers did not equal innovation. And so we went back to the drawing board on the idea behind what you need to have an innovation hub. And it came down to people. The idea of an innovation hub in a country like Malawi is not new, people have been trying to do it for a long time. But a lot of people have a long history of failure of doing this and so we wanted to do something different and we knew things we had tried in the past had not worked so that really opened up our options. And we started asking around in Mich U. meeting people and we ran into an individual by the name of Bill Heinrich who stepped in to help us conceptualize what we could do to support innovation hub in Malawi. And that's how Bill got involved.

- Nick: So Bill this is a good segue into my next question. What got you interested in this project?
- Bill: For me as a professional of the key interest layer in assessment in particular was trying to assess something that was actually really hard to understand so that's sort of the subtitle of my job in The Hub is assessing things that are hard to assess. And so trying to do that in and international context with MSU people doing training and development work using human centered design and design thinking processes was a sufficient number of complex layers for me to be interested in getting involved.
- Bill: I had worked with Kurt a little bit before we started in this so I thought it would be an interesting opportunity. I knew some of the team that Kurt had assembled to implement the project and so I had a good sense of the quality that was going to get delivered, at least on paper. So when Kurt asked The Hub and me in particular to work with other Hub staff and there were some other folks involved, to work to create a design thinking protocol that could be used to train the trainers in a lot of ways. Or train these already very professional faculty and leaders in this institution to use it on their own. That was a really interesting layering to the challenge. So for me it actually puts assessment in the very front end of an implementation project and that's where I like to see it. If we can start to scope assessment very early on then it's a lot easier to point to learning gains and data points in what turned out to be almost a two year project for us.
- Kurt: Bill brings up an interesting point, in a lot of the work that we do, that we've done in the past on building capacity in these institutions of higher education in Africa. A lot of our assessment was design before we implemented anything and then the data was collected after we've done all the work. So assessment was never used as a tool to help up implement the project.
- Kurt: The Innovations Scholars Program, we'll refer to it as ISP, I love my acronyms. We decided that we really didn't want to teach science. We wanted to teach critical thinking skills, design thinking skills and systems thinking. So one of the things that we did early on as a team was we decided as a team that we were going to practice what we preached. We were going to use design thinking and systems thinking to guide how we implemented this project in Malawi. What that means is the traditional model of; we design what the training topics will be, we show up, we deliver that training then we move on to the next training, was thrown out the window.
- Kurt: So we brought in Bill and we said; 'Okay Bill, we would like to do assessment. How would you do this assessment?' And he unbeknownst to, I think himself, when we started this process was one of the first conversations, he said 'well we need you to assess this way and interact this way' and at the end of that conversation it was basically; 'Okay great. Let's go do it. Do you want to join us?' And we really, as Bill said, we built the assessment piece into the initial design that it was not at the beginning and it was not at the end it was a constant through the entire process. That change in our dedication to using design thinking to design, implement, test, redesign, was really what I would call the secret sauce to the ISP program. It wasn't necessarily material, it was how we presented the materials and how we encouraged and tracked the participants in the use of the materials.

Bill: Yeah, so for example we created these workbooks for each of six or seven interventions. An intervention was a three day work shop in Malawi with Malawian faculty with our team, who ever was there, we kind of rotated roles and with our regional expert in whatever, so in systems thinking or in higher ed leadership. We brought in a faculty person from nearby universities, nearby to Malawi, to support that. And so when we built these workbooks each time, which were again modeling and visualizing the design thinking process in context to our workshop goals, and using the work flow the learners would turn the page and see the prompt and have a space for reflection and have a space to do some meta-analysis about what phase of design thinking they were in and who their stake holders where and how they would empathize and ideate and define problems.

Bill: So we were constantly practicing in own planning, as Kurt said 'practice what we preach' you know, practicing design thinking but we were also modeling that along the way with our participants. The other thing, every time they wrote something down it became data capture, and so we had the opportunity with an appropriate IRB institutional review for ethics and compliance we captured all that data and we made sure that we watched closely how these individuals were learning. In this case how to use, how to understand and apply design thinking is what we ended up being the most interested in, although there's a whole bunch of other learning moments that occurred that, you know, we have evidence of and are paying attention to now in the post-project phase.

Kurt: Bill brings up those workbooks and I don't know if I ever told you this, Bill, but when he first presented the idea of the workbook I thought 'oh that would be a great thing to do during the training'. I never thought about them as data collection, that never crossed my mind. I've been doing this for a while, got a few gray hairs, and opening up the door that we could actually use the workbooks as a way to guide what we were doing and bring people along but then use that to collect data on how well they were understanding and utilizing and thinking about what were doing was totally new to me.

Kurt: It worked so well I can't really imaging doing it any different going forward. Because you get people to- we stand up in front of these groups, build a PowerPoint slide and talk about it and they can write some notes down. But there's information that reflects how good of a job they're retaining, they're utilizing information in that workbook that we have ignored for a long period of time. And with Bill's help we were able to, not only capture that we were also able to develop some matrix to actually measure that, and we have documentation that people increase levels of understanding conceptually but also application, they were able to increase their levels of how they applied design thinking not only to their work but we had examples from department meetings, administration, and also with children.

Bill: Yeah, new majors, community events, non-work related kinds of things.

Bill: What was interesting about the project though, for me that it wasn't just a conceptual training project, actually. So Kurt's team created a set of incentives, funding models and work flows to really have the scholars, our innovation scholars, actually experiment with an entirely new phase of their own research, so they were actually applying these ideas

to a real project in their own research agenda and leadership agenda, depending on where they sat in the organization.

Bill: There was an experiential component that was authentic, that was leveraged well to keep, so it wasn't new work, it wasn't like a bolt-on kind of awkward new thing that all these people had to learn. This was 'okay you're an aquatics researcher. Great, apply design thinking to aquatics research. Who's in your value chain? Okay well actually it's not just the aquatic fish people, it's the people who buy the fish and the people who drive the fish to the market and it's the people who sell the coolers to the driver and it's the people who end up consuming the fish.' So there's this whole value chain or value proposition. All those people are stake holders in that particular research project. Once our researcher partners identified them as stake holders it actually changed the way they thought about the research. That was a really interesting implementation model to say; 'okay here's the idea of design thinking so try it out.'

Bill: And so there were check-ins along the way between those six or seven different work shops depending on how you count. We went seven times for those workshops. Anyways, the point was the researchers were applying these ideas as they went. So they were learning too, it was also work that mattered to their own reward structure, just like faculty anywhere; you get rewarded when you teach and do research, and so they had to keep doing stuff. We asked them engage with us on this design thinking model to try to be a little more innovative. We saw some interesting results, first of all, like Kurt said, we saw evidence that people learned it and did apply it, that was really interesting. We actually saw some research outcomes in the food systems in which these folks were researching.

Kurt: So let me back up just a little bit. When we were initially planning this program, we had Bill in the room and I was in the room, and a couple other individuals I need to talk about, in a positive way. John Bonnell and John Medendorp. We call them the two Johns and myself. We had done a lot of work in Africa and other parts of the work in capacity development. The Johns had led programs in Rwanda and other places. We sat down, we were talking about things that we thought had worked well and things that we thought would be fun to try. So we came up with a laundry list of ideas we thought we would try to build this program around. Bill was in the room we were saying 'can we assess that' and you're like 'yeah, I think we can do that'. Some ideas we knew we really couldn't do, we didn't have the time or the budget so we dropped those. Okay, so here's what we think we can do.

Kurt: Then we got on a plane and went to Malawi and sat down with our stake holders; being the recipients of the training program. So we got faculty from Lilongwe University of Agri-Natural Resources. Another acronym coming; LUANAR. And we said that we would do a training program for you. And we asked them; 'what do you want to get trained on?'

Kurt: They were like; 'what, you just asked us what you wanted to do training on?' And its like 'yeah, we want to do some capacity development work what are some things you want to think about?' And its like 'well you're suppose to come with a list of items'. And its like 'oh no, we're approaching this with design thinking and systems thinking'. And then

the Johns and myself we did a program; we reintroduced the topic of design thinking to a small group at LUANAR and literally it took about 30 or 45 minutes and you see the light bulbs start to go off in the room. And its like wow they are actually listening to us, and then they actually told us go back to our hotel and come back tomorrow. We came back and they had a whole list of things they wanted to be trained on.

Kurt: And so we took that and we designed a training program with them, via design thinking, on design thinking. That's a little meta, I understand. But it set out a tone that really said that; if we're going to expect them to approach their work in a new way we had to approach our work in a new way. And that became a basic mantra that we did all the time.

Kurt: So Bill talks about these workbooks we created. They were great, they were multiple pages, well done, they were really, really great. The only problem with them; we never really followed them. Every page.

Bill: Right, we couldn't because we were reiterating on the fly, in those moments. The reality on the ground of any work shop is that the participants are really smart people and they see through what's going on and they pick up what's happening and they are really interested in going faster or in a slightly different direction. Being that the model as Kurt just described was to use design and iteration to meet the needs of these participants. A lot of the workshops didn't follow exactly on the workbooks.

Bill: That being said we had enough flexibility in the designs even in the workbooks to ask people to use the blank space to write down what they were thinking about. So when we stepped back as a research team and analyzed the content of the workbook our questions weren't ever 'did you follow the workshop' that's not how we approached it.

Bill: But we were interested in the concepts and application of design thinking in particular just to see if we could understand it. If there was a way to measure this at all? So from The Hub stand point we were really interested. We were using this all over the campus and one of the challenges faculty tell us all the time is they're like; 'well how is this academic? How do we know this works, what's the evidence of this fad facilitation model versus all the other fad facilitation models that people charge us tons of money for?' And you know the honest answer to that was 'we don't really know'. So part of The Hub's involvement at first was to really understand if we could even learn from this model if there was evidence to back up its use case in higher ed. It comes out of Silicon Valley and technology. So we weren't sure how it was going to apply. So a small diversion, but the workbooks had flexibility so we could still capture information despite the work plan kind of going off. ... well they never really went off the rails, but you know ...

Kurt: No, lots of spurs (laughing)

Nick: They iterated on to different rails. (laughing)

Bill: They did, they jumped tracks sometimes. (laughing)

Kurt: A lot. A lot. One of the things Bill brings up an issue that we face a lot is how does something like design thinking interact with the scientific method. You know, we have theory and we test and that's what we do, we're scientists, its subjective. It's solid science. What we found out was and what we did in Malawi was we asked the faculty, the scholars to form design teams around their scientific question. One person wanted to go out and study indigenouness plants, another person was studying goats, but instead of just going out and collecting data for their research. We had them and coached them through the process of going out and working with a group of stake holders around defining their science question. That was the initial point of departure from traditional methods. And I think it's a real insight into how design thinking can lead to and support the scientific method.

Kurt: Design thinking can help people understand better about how to approach the problem from a scientific methods point. It's not about just collecting its raw set of data to advance a theory. It's about how can we use a scientific method to be applied to a problem that's relevant to our stake holders, to my stake holders. And that change opened up, for some of our participants, the opportunity to really get engaged with the community, private sector, and also help create new and better experiences for students at LUANAR. Some of the faculty I will admit, didn't get that, and you're never going to have 100 percent reception to everything.

Kurt: And so we found we were basically able to put people into three categories; the people who really got it and really understood it, design thinking and scientific method and all that together. The people who really didn't get it and who probably never will get it, which is fine. And then there's this third group who seem to really talk about how much they get it but never did anything with it. Which is another natural outcome for this. So our program was successful, but it wasn't successful against the entire population. And I think that's normal because you're dealing with humans, I mean, it's a social science.

Nick: Something I find interesting is, you know, kind of what you guys have been talking about is really touching on a lot of the other conversations I've had with people at projects at The Hub and projects they've been working on. This concept of participatory design that we've talked with on our last Podcast on your guys mentioned not whether you're like; 'here's our training offerings' but 'hey what do you want to learn? Let's design something together.' I think that's interesting so I'm wondering based on your experience what do you think of others who are out on the campus or you know, out in the world even can learn from it that may help their research, help their projects, help their general work life.

Bill: I appreciate that question. So again coming from an assessment standpoint I'd say, set a deadline and set a goal. Right, set something that you can actually do. So here's what we did; all along in this project, just as an example of participatory design and capacity growth for our participants, we said we want at the end of this project, we want our faculty participants to be able to lead in the concepts and in delivering their own design thinking modules.

Bill: And so we did that, we actually set that up so at the very end of the program we had a closing symposium and we also timed that visit to Malawi with another pan-African

meeting called; The Regional Universities Forum on Agriculture, also an acronym RUFForum, so we got on the agenda at RUFForum, we actually co-presented with our Malawian faculty partners who had been part of the previous two years of workshops. So three of them were available and joined our presentation team and presented to 100 deans and directors in Lilongwe, last October.

Bill: Our sort of symbolic take away is that these three individuals as a representation of this project were able to stand and deliver and really do the work in a public facing kind of thing in a professional way. So my advice then, back to The Hub is set goals and set deadlines and work towards them. I mean, we put the challenge out, the faculty were ready they saw the opportunity, it was attractive as an opportunity for them as well. So it was an easy sell, it wasn't hard to recruit them to that. But we had to, you know, we had to make sure that they were comfortable enough with the concepts, and the application to actually then co-create and co-implement yet another work shop.

Bill: So if you want people to learn it, have them do it. I mean, this is the old adage, when you teach someone to do it, you realize how badly you really understand an idea. Because you have to try to do that, so we had modeled that along the way, and some of the workshops we had had our participants teach design thinking concepts to their stakeholders so they had been doing this all along. So it wasn't- there are scaffolding approaches to help people be successful when it comes to those higher profiles deliveries. But, yeah, just practice it and set a goal and go after that.

Kurt: I think the other thing is; capacity building in international development world. We call it; Humanist Institutional Development, HICD, another acronym.

Nick: (laughing) So many acronyms.

Kurt: So many. (laughing)

Kurt: This is hard, so there's this old adage, you know, 'this is not rocket science'. Well I think HICD is actually harder than rocket science, the mathematicians, and the scientists have worked out the math behind, you know, how much thrust and projection, you know, they can get a rocket to the moon. That's rocket science, that's down. We don't know how to do this, HICD work, its hard, because you're dealing with norms, you're dealing with cultures, you're dealing with institutional structures, a whole bunch of stuff that we really don't understand from an outsider perspective.

Kurt: So what we do with our approach to HICD was; lets give people a new set of tools and that would be in our case design thinking, systems thinking and then let's slowly, over a period of time, it's two years, introduce the tool slowly and then give them a ways to safely practice. And it wasn't just a one day workshop or just a one week workshop, it was six or seven workshops over a two year period, where we slowly dripped in the ideas of 'okay, we want you to practice this piece.' Introduce it, practice. And we created a safe space where these people could come together and play with the set of tools, and it not have any negative impact on what they were doing, professionally.

Bill: Right. So the hub talks about creating safe spaces to practice all the time. We're always talking about like institutional cover, right. Is it permissible to do this kind of thing in this cultural institution called MSU? We asked the same question all along, we got deans and essentially the campus provost to sign off on this and give verbal and symbolic and financial support, which made it permissible for these faculty to take these new things and new ideas. So just like any department in most colleges and universities, right, big changes outside the status quo aren't going to be necessarily welcomed from the rank and file. You've got to get certain permissions along the way. You know, from sitting in The Hub for me, I was able to see that model in place and say like; okay there's a fighting chance for this thing to work because they have enough of the institutional kind of protections in place. That safe space to do the work well.

Nick: Alright, so final question here. You talked a little bit about the other people you worked with, I was wondering if you could expand on that and who they were and what they did as part of this project?

Kurt: Yeah, I'd be happy to. So one thing I try to do is I try to find really good people to work with, and we try to find ways to put them together to do fun things.

Kurt: John Bonnell and John Mendendorp are specialists in capacity development in higher education. They live, breath, eat this stuff. They've had a lot of experience and they had a lot of ideas of how to do it better based on their past experience. Bill brought to the table this capacity to, not only to do assessment but also help us be better at presenting what we were trying to do. You know, when we had crazy ideas, he's like; 'okay, how are we actually- A. assess this and then how are we actually going to present this?' And introduced me to this idea that planning a workshop is not- doesn't take- you don't do it in a couple hours. It takes literally hours of work to plan a good workshop. And our team worked on planning these three half day workshops for weeks. We slowly work on it, and we got very good at putting together very detailed plans for these workshops.

Kurt: Now after investing all that there was also an understanding that this was our starting point. We were going to go there and interact with our target audience and then we were going to adjust on the fly to make it fit what they fit. The other issue, the key to our team was the fact that anybody could step in and help us make changes. Everybody did. Everybody who participated did that. And then besides the four of us there were some key individuals who really helped us pull this all together. And those were some very talented new MSU graduates and undergraduates who stepped in to really help us do some of the grunt work to make this happen. Trisha Bolo was a recent MSU graduate, she was the go to person on handling all the details for this. She kept our notes, she kept us honest, she kept us focused a lot of the times. And then Rebecca Blendell came in who really helped us organize and move things forward after Trish moved on with her career. And then Libby is just, Libby was incredible.

Bill: Yeah so from the hub's end. Early on we worked with Leigh Wolf and Caroline White with some of the prototypes for the first design thinking workbook and workshops. And then Libby stepped in and stepped up and helped us visualize a lot of our workbooks and designs and do renderings.

Nick: Was that Libby Hoffman?

Bill: Libby Hoffman. Did I say that right?

Kurt: You did now.

Bill: Libby Hoffman.

Nick: I just heard Libby, I just wanted to make sure [crosstalk 00:27:46]

Bill: Oh yeah. Libby Hoffman came and did graphic design and rendering work and helped up conceptualize and visualize our workshop workbooks through the rest of the program. And also helped build capacity on Kurt's team to pick that up for future kinds of iterations, which we're starting to do now. Iterations of the design thinking applied to higher ed systems.

Bill: And we enjoyed a lot of support in The Hub besides just my- I mean I was the primary point of contact, but there were a lot of other people who stepped in here and there with communications help. [inaudible 00:28:20]Teal's team helped a lot and back to Kurt's point the team on the ground, that trust in the moment, to be able to facilitate together to play off each other's strengths in those moments when there's tough questions coming from our participants, co-designing from remote standpoints. So we'd have people zooming in and Skyping in from all across the world, literally, of our own team who were traveling on other projects and also our regional partners and also the faculty with whom we were working, because they were co-designers in their process. We'd have this unruly sort of zoom calls that lasted a long time. But we got a lot done because we were committed to that team layer, and that actually, I echo that. That was a really interesting and educative side of experiences for me in The Hub.

Kurt: We met here in The Hub on a weekly basis. I don't know how many hours I spent in this room, talking about this with people up on that screen we were communicating with. It was really great for us to have a resource like The Hub available. That we could bring in and, you know, I'd be honest with you; the work we're doing in Malawi is tangential to the work that you're doing here in The Hub. But that point of tangent where the two come together is really fruitful for both of us. And it was great that we were able to come in here and utilize The Hub and the resources and Bill and others because it all made our project better. We would not have been able to do the ISP program to the degree that we did, to the quality that we did, and had the success that we had without Bill and The Hub and the people he brought along with us.

Bill: And the lessons we learned in The Hub, I mean, we're applying in our overall Hub playbook. So how to assess design thinking is showing up there. We're reusing it in similar HICD projects across campus. So MSU does a lot of international human and institutional capacity work, so we've applied this model. John Bonnell is applying this model in his new role. We're seeing it in another project that we're launching, we're getting asked to consider how to do it in more and more projects. Almost weekly we get these requests. Not a bad problem to have. From a modeling standpoint that's what The

Hub wants to do, create good models. Like I said, it's in our design playbook, it shows up in other Hub projects. Like how do we actually understand people, can assess for learning in these spaces? That's a really powerful set of lessons that we've learned from The Hub standpoint so we were happy to be engaged. And we can take a lot forward from it.

Nick:

That will wrap up another episode of the HUBcast, if you're interested in learning about The Hub or in working with us please check out our website at hub.msu.edu or you can also follow us on Twitter, we are @MSUHub. You can also just come down to D101 Wells Hall, we are always happy to chat. Thanks and we'll see you back here next time.