

24-01-2024 TUURE TUUNANEN – TRANSCRIPT

2 SPEAKERS

Sebastian Reiners
Tuure Tuunanen

Duration

30m 8s

START OF TRANSCRIPT

[00:00:03] Sebastian Reiners

Hello and welcome to today's interview as part of the Design Science Research Academy. My name is Sebastian Reiners. I'm a research assistant at the University of Münster, and today I have the tremendous opportunity of welcoming Tuure Tuunanen to today's interview. Tuure is a professor of information systems at the University of Jyväskylä since 2012. And before that, he had several positions as a senior lecturer as a professor in New Zealand, the USA, and Finland, and is currently also holding the position of a director at the Finnish hub for digitalization. And with that, Tuure, welcome to this interview and...

[00:00:51] Tuure Tuunanen

Thank you very much.

[00:00:52] Sebastian Reiners

Do you mind talking a bit about your current tasks, your position, what you do?

[00:00:57] Tuure Tuunanen

Yes. I'm happy at the Faculty of Information Technology here at Jyväskylä for the past ten years, and some, approaching 11 years this year. Nowadays, just a regular professor, so I used to be a vice dean of research for the past four years, and I returned to a professor tasks last fall, really enjoying my time. Within those two duties, I lead this research hub that you mentioned, which is a joint research center with five other universities, so we have six universities involved with several hundred researchers under this umbrella. But maybe my daily activities are more related to our research group here at Jyväskylä, which has some 40 members altogether with three different research teams within the group. And I'm trying to lead this outfit, and that sort of basically preoccupies most of my time here, in addition to the teaching and all the service stuff related as well. That's pretty much what I do at the moment. So, what else would you like to know?

[00:02:32] Sebastian Reiners

I do have some questions, but, for that, we do have to go a bit into the past—17 years, to be exact. You wrote a paper, titled A Design Science Research Methodology for Information Systems Research and the Journal of Management Information Systems, together with three co-authors. And this paper is renowned to be one of the leading papers for the design science research world. It has basically, say, shaped how we perceive design science today in information systems. And I would like to go with you through this paper and throughout your process of writing this paper, how you perceive it today. What you basically do in your paper is you argue that existing methodologies, and we are in 2007 at this point in time, are not really suitable for addressing the unique challenges that are posed in information systems research. And you then propose this methodology, emphasizing the creation of innovative artifacts as an approach to solve these unique issues we face in information systems. Can you go a bit further into this first idea you had? What came up on your mind with you and your co-authors? Why did you write the paper in the first place?

[00:04:03] Tuure Tuunanen

Yeah, there's a story behind this, and it started before 2007. Well, of course. So, I was doing my PhD during 2002 to 2005 at Helsinki School of Economics under supervision of Matti Rossi. And Matti, of course, is a familiar name for action design research. But actually, as it happens, Matti was also my PhD supervisor back in the day. During my studies, I was doing like many, many people were doing at the time, I was doing design science research, which was sort of characterized, when we were publishing things, as qualitative research. So, that was what people did before the Hevner paper came out in 2004. And while I was sort of starting to get ready to sort of write my dissertation manuscript, at the time, we had already in Finland, and at least in my school at the time, we had this article-based thesis concept, and I was also doing that. I remember that I was starting to write the overview section that would sort of tie all my papers together. I had five articles in my dissertation, and at that point there was a stroke of luck that Matty came to my office and said, Tuure, I have some good news. And he had a pre-copy of the MISQ paper by Alan and others that came out in 2004. I was ecstatic and overjoyed that finally there's a paper that will help me to write my dissertation because I was struggling with the methodological issues and how to frame my work. And then I looked at the paper, and there is one of the main figures that describes the research process, and I was looking at it. I don't really like this. I don't really like this model. It was too, too abstract, too high level, and it was difficult to sort of think about how would I plan my PhD study if I would start with this figure, and that led to sort of the result that I wrote something for my overview of my dissertation, which later became this JMIS paper that we are now talking about, and the sparking idea was that the unhappiness with the MISQ paper by Alan and others, unhappiness in quotation marks because I did really like the paper, but I did not see the clarity in how one could, how a PhD student, could use their model to actually plan and study. And then, after I defended my dissertation 2005, I moved to New Zealand and started working in the University of Auckland. And we were corresponding with my old friend Ken Peffers. Ken and I were sort of keen to sort of push this idea that I had presented into my dissertation to a journal paper. It was an interesting process in that way that typically these top-tier journal papers takes a long time to develop and write. It was not the case with this article, manuscript. So, actually, I remember that the review process was quite smooth. We got the accept from first submissions to acceptance. It was about one year, year and a half, or something like that. And we presented the early version of the paper at the first DESRIST conference 2006. We were boldly saying at the conference that we will publish this at MIS Quarterly. And people say there that, No, you can't. There was this special issue going on at the time, and we did sort of offer our manuscript to the special issue editors. I don't recall who the persons were who were leading, but I remember that they said that, oh, we are not interested in papers which tell about doing design science research. We want papers who do design science research, which is the same thing nowadays that we hear that please write papers that actually conduct DSR instead of always trying to complicate our lives and making new rules and methods. What you should do when you're doing DSR, and it was the case already 2006 when we were discussing. But then, we did get very good feedback at the DESRIST conference. Based on the feedback, we refined our manuscript. We invited Marcus and Samir to be co-authors of the paper, and sort of the key idea, which is typical for many of these DSR methodology papers, is that since we were proposing a new methodology that had not really been used before, we needed use cases. For that reason, we asked Marcus and Samir to come along because we knew that they had been doing some interesting stuff with DSR. We presented four cases. You know how you would use our proposed methodology for the person. So we were sort of using our own methods, methodology to write the paper also, and evaluating the methodology, which was quite a fun thing to do back in the day. But that was sort of the birthing story of the paper. So it sort of started with the frustration of the seminar paper by Alan and others. And it ended up being accepted with JMIS, with reasonably few review rounds. I think there were maybe 2 or 3 rounds, but I remember that it took the journal year and a half. That was accepted. It was super, super quick. Already then, but now as well.

[00:11:00] Sebastian Reiners

That is astonishing, first. I mean, every, pretty much every researcher is striving with all these times but having one and a half years for such an established journal. That is astonishing, really. That is quite a statement.

[00:11:14] Tuure Tuunanen

Yeah, it was very quick, and I don't recall the reviews by heart anymore, but I remember that even the reviews that we received were very helpful and supportive as well, which also, of course, explains the fast turnaround time. And of course, I was young and eager, and I was working 24/7 to push this forward. But it was a smooth ride. Let's say that it was very inspiring. We didn't expect, Ken and I, that the paper would be such a big success. We sort of thought that it might be useful. We wrote the paper for doctoral students. So if you want to do design science research, this is the introduction, 101 of doing your PhD research. Of course, it's not surprising why we did it because I was just a freshly graduated doctor, so I was thinking I had still good memories of, you know, what were the struggling points for doing your PhD research. What kind of things I would have liked to have when I was doing my own research. Later on, it seems that other people saw value in that as well. It is, of course, very nice and rewarding in many ways. But, let's say, that especially nice for me is that I see that many people outside of information systems are applying the methodology, and it's sort of spreading to different fields of research. That is really sort of something that I sort of cherish that we have been able to make an impact outside of our own discipline as well.

[00:13:04] Sebastian Reiners

Me, as a doctoral student myself, I can definitely say that this paper has been nothing but tremendously helpful at doing my own research. So, you definitely achieved the goal or one of the goals you aspired to do. So that was very, very nice of you.

[00:13:20] Tuure Tuunanen

That's very nice. Very nice to hear.

[00:13:22] Sebastian Reiners

To write that paper in the first place. Thank you for that. You were touching on that briefly, but I might want to pick that out a bit. If you try to retrospectively look at this paper and what you did, I mean, looking at Google Scholar, the paper is currently sitting at 11,000 citations, which is an enormous amount of citations. Could you try to summarise, maybe the main contribution or contributions, if you don't want to be picky on one, of this paper, what it did for you or what you are in particular proud of, of this paper?

[00:14:00] Tuure Tuunanen

Well, I think you mentioned that, or with your comment that, people have found the paper to be helpful in doing, especially your first design science research studies that, you know, it's a very simple method. And we designed the methods as such that it should be useful for doctoral students to conduct their studies. I think that's the key contribution of the paper itself. We had some fancy ideas in addition to this when we were writing the paper. We have these four different starting points for the project. For some reason or not, maybe not that surprising. That has not really sort of picked up too much steam. But, I remember that we were when we were talking about this with Ken, we realized especially Ken was more senior researcher than me. He had seen more projects than myself at the time that, you know, research projects don't sort of typically start always with the, you know, with the formal setting of research problems and so forth. And our idea was that we would offer the opportunity for other researchers to sort of, honestly, tell how the process went. But that idea didn't sort of take on so much. Some people have tried that. I've seen papers using that.

But mostly people use the process that a nominal process model that we propose, which is the different stages, which is, of course, the key contribution of the paper. Sort of surprising thing that I have noticed that, and I have been presenting some of my DSR stuff and talking about this paper in those presentations. Well, people don't seem to notice that we very much meant our process model to be iterative. It's not a waterfall model as such. But we were, when we were writing the paper, we always felt that there should be loopbacks, there should be durations between the cycles, and for that reason we call the process model nominal process model because we didn't want to lock, give the impression that, you know, it's a waterfall, you know, straight down, simple process. We realized that it's more complicated than that. But this was something that we perhaps didn't highlight enough back in the day. If you would ask me, you know, what would I do differently? I would maybe try to emphasize this iterative nature of the model. Something that I have in recent years considered also, is that, how to sort of use the DSR model for design science research cycles. I have myself written papers that use this methodology to describe iterations, and that has been not always so straightforward. There is, if you want to read a very complicated research project, there is a paper by me and Ken, published in the European Journal of IS in 2018, which describes a project that lasted 15 years which involved 200 people, five different countries, and a lot of other stuff. It also includes, of course, many, many cycles within the, I think, five independent studies that were sort of part of a larger research program that was reported in this article. But on hindsight, I would have maybe tried to focus a little bit of more effort on describing the cycles of research instead of looking at the starting points that we were at the time thinking that this might be quite novel and interesting for people. But on the other hand, just to contradict myself and what I said before, it might have complicated the rather simple process model that we were presenting. It might be actually good that we didn't do that because, if you do doctoral research, it should not be super complex because you have a set of, you know, number of years to complete that. The complexity increases when you start to try to do other research, more advanced studies, later on as you have graduated. So, maybe it was wise not to make the model more complex. So it would be applicable for, as many people as possible starting out their careers and doing design science research. But this would be perhaps the things that easily come to my mind thinking about these things. I'm still quite happy with the paper, actually. You know, in hindsight, I wouldn't change the paper that much. It's always, every paper is a product of its time. It sort of captures our thinking in years 2005, 2007, when we were writing the paper with Ken, and it has lasted quite well in that terms. It's a easy paper to read, I think. And thank you for your kind words earlier on as well. What you were saying on the paper.

[00:20:16] Sebastian Reiners

Yeah, it's amazing.

[00:20:16] Tuure Tuunanen

You were making me blush a little bit.

[00:20:20] Sebastian Reiners

Oh no, that's just slight. Don't worry about it. That's just slight. That's amazing. We can filter that.

[00:20:27] Tuure Tuunanen

No worries.

[00:20:28] Sebastian Reiners

No, honestly, it's great to hear that, after 17 years, the paper still works. That's great to see. And it's also very interesting to see, like, as a young researcher, that you still want to change, like a few things. They might be like, nitpicky, like promoting this iteration, but it's interesting to see, like how you would do things

differently now. You mentioned quite a lot these young researchers and guiding young researchers with this DSR process. Maybe we can touch on that subject a little bit. Say someone is looking at DSR for the first time, hasn't done any DSR research, or is just starting to get into this doctoral time. Is there anything or some ideas you would recommend to young researchers regarding publishing DSR research in information systems? In respect to what you experience, maybe both as a reviewer, as a senior scholar, and as a young researcher, you have been yourself during 2007, maybe.

[00:21:44] Tuure Tuunanen

Let's say so that when I was a young doctor, publishing DSR was not that straightforward. It was much more difficult than nowadays, and luckily, now the situation has changed quite a lot, actually. Nowadays, if you do rigorous work and you, you know, try your best, you can actually publish your stuff quite easily. Especially, myself. I'm a senior editor of the European Journal of IS and Journal of AIS. Especially with the European Journal, we publish quite a bit of DSR nowadays, and I'm very proud of the journal for doing that. I'm, of course, trying to help out as much as I can to get good work published. So the situation for young researchers considering DSR, it's actually good news in that regard, that you don't have to be concerned if you want to do DSR, that will not hinder your publication possibilities that much. What I would sort of say, as an advice, back 17 years ago, or 20 years ago, or today is pretty much the same. What I tell students and young scholars today is that, with design science research, it's important to think ahead of how you evaluate your artifact and how you are developing the design knowledge. Today, we talk about design principles. How you develop those during your project, how you evaluate the utility and effectiveness of your principles, or your artifact, or both. This is quite crucial, and I often see when I edit for submissions that the evaluation comes as an afterthought in the end. That, you know, you have done so much before that; you have built the prototype; you have done a lot of work; and then you arrive at the evaluation, and then you start to run out of steam. You have not really sort of thought things through so well. That typically still is a problem for research. Not specifically using this article papers methodology, the DSRM, but actually every kind of DSR. So, that would be my advice: plan ahead. Think what do you want to do for the evaluation; think about the theoretical knowledge, the design knowledge development, how you sort of plan that through. If you have several design science cycles, how those will impact the evaluation practices and so forth. That, if you do these things right, and then you have to be also always agile with your feet when you're doing these DSR, because things will not go in the way that you have planned always. Sometimes they do, but most often not. Especially if you're working with industry, you know, surprising things happen, always. So you have to have some heuristics and plans that if things don't quite work out, what you're going to do next. Think about the evaluation, you know, just thinking of some of the projects that we ran during the COVID pandemic, you know, that such an out-of-the box event that really, really created a gray hair and losing hair for many doctors, students, and seniors as well. So, things—funny things—can happen. Some things that you can forecast that might go. But the key thing is that, think ahead about the evaluation. If you do that, then the forecast is good because then you have a solid roadmap to success. Regarding the design knowledge development, we are lacking in that, that we have many excellent papers to guide us on that. I've been especially liking some recent papers by Leona Chandra Kruse and her co-authors about design principles. These are really helpful in my mind. I really would have loved to have those back in the day, when I was a young scholar and trying to sort of formulate design principles. So, we have many of the things that I was missing out now in place. You guys can now focus on doing the stuff and not so much worrying about what is a rigorous design science research methodology or what is an artifact, how you theorize the results. We have solutions for this. And there is, of course, an ever-evolving debate how this goes forward. Perhaps something that I'm waiting to see is that how we actually make these mid-range theories that include design principles

to more mature design theories. That is, perhaps, the last thing that I'm sort of seeing that hopefully the community can address in the next following years. But other than that, we are in a pretty good place in my mind that we don't have to sort of build the ship; instead, we can sort of think about navigating with the ship somewhere else and really doing the research as we go along. I don't know. Did I answer your question?

[00:27:43] Sebastian Reiners

Yes, you did. You totally did. You actually went ahead and basically got into the outro for me where I wanted to ask, like, What do you desire for the design research field? And you jumped ahead and answered it.

[00:27:56] Tuure Tuunanen

Oh, right.

[00:27:56] Sebastian Reiners

Yeah. Perfect. You did everything and more than I ask you to, 120%. That was..

[00:28:01] Tuure Tuunanen

Oh, very good.

[00:28:03] Sebastian Reiners

Yeah.

[00:28:03] Tuure Tuunanen

Love to hear that.

[00:28:04] Sebastian Reiners

Yeah. Good job on that. One might recognize you as a senior scholar who just does everything perfect.

[00:28:12] Tuure Tuunanen

Thank you so much.

[00:28:14] Sebastian Reiners

That was tremendous. That was tremendous. Basically, for me, all I can say is I can thank you for your time, and I just want to give you the opportunity if you want to give a last few words, but other than that, it has been a pleasure to have you here. Do you have any last words for the design science community?

[00:28:32] Tuure Tuunanen

Well, I have a joke. Let's see. I tell this joke when I do a seminar and I try to teach how to do design science research. And the joke goes like this, and listen carefully: So, there are three kinds of research. One kind is truth-seeking, that you try to find truth so empirical work, positivistic, quantitative work, and so forth. Then, second style of approach to research is trying to understand what happens in the world, and this is quite often like qualitative research, interpretive research, you know, understanding why things work like that. And the last bit is design science research. And there we create the truth. Because we are creating artifacts, and we are theorizing. We have theory-infused artifacts. So, I welcome everyone to this third approach and creating new truths. Maybe. Maybe not fake truths, but something else instead.

[00:29:50] Sebastian Reiners

If you don't like the reality, just make your own.

[00:29:53] Tuure Tuunanen

Yeah, and with design science research, we can do that.

[00:29:57] Sebastian Reiners

Perfect. Tuure, thank you so much for your time, and I wish you a pleasant day.

[00:30:04] Tuure Tuunanen

Thank you. Same to you. Thank you very much. Bye bye.

END OF TRANSCRIPT