

QUEST 2016

Heidi Siwan Integrative thinking

HEIDI: It comes from the work of Roger Martin who's now the former Dean of the Rotman School of Management at the University of Toronto. And he had realized that business schools had hit a wall, and the kinds of graduates they were producing didn't have the creative and problem-solving skills needed to cause innovation to happen. And that, in fact the kinds of graduates that were being produced were ones that were making decisions that were putting businesses and economies at risk, as in the collapse of 2008. And so he set about finding a different way to teach within the business school, he did that by interviewing really great problem-solvers, people around the world who had found innovative solutions to really difficult problems, and he wasn't interested in their process but in their thinking, how did they think as they engaged in finding their solution. And he noticed a pattern and he came to call that pattern Integrative Thinking, and then he thought, well, how can I teach anyone to do this, so formalized it. And what it really comes down to is considering tensions right? So when you have complexity you have tensions. How do we want to think about those tensions? Our typical way of thinking about tensions is either fear avoidance, so you want to crush the opposing side or you cave into the opposing side or you just want to pretend that's not happening and maybe it'll go away, or, you feel you have to evaluate and then make a choice. Right, I've got A, I've got B, pros and cons of each, and then you choose which involves compromise and trade-offs. Integrative thinkers don't do that. They explore value in each tension, and they extract that value, and they use it to create something entirely new, that hasn't existed previously, that is better than any of the models that existed previously.

And to do that, what Rotman has done really well is pull together a set of tools. So they haven't invented the tools, they've looked in different places, and so some of the tools are Ladder of Inference, Causal Modelling, Mental Models, Understanding System 1 and 2 Thinking, those get taught explicitly to students, so that forms their toolkit. And then they can use that to engage either in problem-solving, or any kind of thinking they have to do in the classroom, they can draw upon those to get to much better places with their thinking. We had an article that we had read from the Sochi Olympics where some athletes wanted to honour, I think it was Sarah Burke, she had passed away, she was a winter athlete, and they wanted to wear a black armband, athletes, to honour her because she was the one responsible for that particular sport being put into the Olympics and of course the Olympic Committee said no. So then what we, and that caused upset amongst a lot of the athletes, they weren't allowed to honour the hero of their sport. At the same time there was conflict happening in the Ukraine, there was uprisings happening in the country and some of the athletes from the Ukraine wanted to honour people who had been involved in that conflict and some who had ended up dying in the conflict and again, they weren't allowed to put any kind of marking on their uniform. So we set about resolving that tension and we created, started by creating extreme models at either end. So what would it be like if you could wear anything you wanted to the Olympics, and what would it be like if everyone wore beige. Right, we call it a beige model, you couldn't even tell what country everyone was from. And then we

considered stakeholders, athletes, the countries and, I can't remember who our three stakeholders were, and then we explored, well to an athlete what would be valuable about each model? To the organizer of the Olympics what would be valuable about each model? And then to our third stakeholder, I can't remember who that was, what would be valuable in each model? And we looked for patterns within that and we extracted those and then the kids used those to create something entirely new for the Olympic uniforms, and I can't remember offhand what their solutions were but they got to some really interesting places in terms of what could be created.

So about two and a half years ago, I'll start with the Integrative Thinking piece because I think that's really the point at which things really began to shift in my classroom. And that began with an invitation from Rotman, they had recognized that these thinking skills, learning them in your 20s was way too late, these needed to be taught to younger people. So they started with an after-school program at an independent school, testing out some ideas, and they had been at that for maybe one or two years where they had then reached a point where we need to bring other people in, so we had a one-day introductory session for teachers on Integrative Thinking and I got an invitation to that and I went for the day and that was the eye-opening moment for me. And I was so excited about that 'cause I could see, oh, this is the piece we need. I went back to my classroom and immediately began testing out some of these ideas with my students and, as I do, I have a blog, The Amaryllis, I started blogging about it which got the attention of Rotman, they noticed that, and they reached out to me then saying oh, that's interesting that you're actually talking about what we presented on, and we formed a relationship where, it's a big shift to begin working with tools of Integrative Thinking in the classroom so I just went one tool at a time for understanding what is this tool, how can I use it, what is its impact on students. And then I had shoulder-to-shoulder support from Rotman, I'd call them up and say, okay this is what we did, this is what happened, what do I do now? And we figured out, we prototyped and tested ideas about Integrative Thinking until we understood how the tools could be used, that was the first year with it. The impact on my students was so great that our Principal released the entire middle school staff, brought Rotman in and they received a full day of training in Integrative Thinking, and then, after that, we put in a proposal to our Board to bring this to our Board. So at this point in time over 75 teachers have been trained in this. And we made sure that, when we did the first model of this, we put together our ideal PD situation, where it's driven by the teachers, supported by the Board, and we wanted early adopters in, so those who are already involved in innovative practices in schools were invited to participate, and we thought what a shame it would be if the middle school students got this, and then they went on to high school and the high school teachers had no idea. So we brought high school and elementary together to participate in this training so there's continuity. And we had three days of training in Integrative Thinking, but they were set apart by a number of weeks, and in-between we would meet informally, and bring together ideas that we tested out in the classroom, talk about it, learn from each other, so it kind of just developed a really interesting way to move through this. So that was kind of what happened with it in my classroom. I've also brought in Design Thinking and Knowledge Building as well, and they've just now nicely gelled together into what I see as a different kind of pedagogy.