JOHANNA MAIR

INNOVATION FOR IMPACT –
TRANSFERRING LEARNING TO HIGHER EDUCATION INSTITUTIONS IN GERMANY

Humboldt Ferngespräche – Discussion Paper No. 12 – August 2017
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Summary
Which role does innovation play for organisations in achieving social impact? Innovation is a means to learn and to address a number of uncertainties. However, it is not the direct link to create impact. Innovation is an investment and what turns an investment into impact is scaling. Scaling is defined as the increase in volume and size but more importantly growth of quality and productivity. There are six generic pathologies of innovation: never getting started, having too many good ideas, stopping too early, stopping too late, innovating too soon and insufficient exploitation. Those pathologies have to be recognized in order to overcome them and achieve impact.

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Further references


I have to give credit to the team of Humboldt-Universität zu Berlin for inviting me. When they reached out first, I mentioned, “Well, I’m not an education expert, am I? I am an educator by heart, this is what I live for, but I don’t study education per se.” Yet, they were persistent, “No, we think you have something to say to us,” and so I’m delighted to be here and I count on you that you will actually facilitate the transfer of knowledge from the research that I do to today’s topic - ‘Innovation in Higher Education.’

The idea was that I give you a little bit of an impulse, if you will, to really unpack the issue of innovation for impact applied to education. Now, I will present to you some insights that are related to a recent book which my colleague Christian Seelos and I have just published with Stanford University Press. It’s a book that, in a way, not summarises, but allows us to reflect on a research trajectory of ours. We studied social enterprises, organisations that address societal challenges in an entrepreneurial way, very often also by involving market-based activities to create impact. We have studied those organisations for over 15 years. Then, 5 years ago, the Rockefeller Foundation approached us with a specific question. They came to us and asked, “Christian and Johanna, could you help us to understand whether a capacity of organisation to continuously innovate in the social sector exists, and how it manifests?”
So, is there something that allows organisations that strive to create social impact to continuously innovate? I think there is also a very important connection to the topic of today, because some of you might be aware of the tenth anniversary report that an expert group on research and innovation in Germany issued. In this report they exactly tried to understand whether higher education institutions can continuously innovate in order to avoid being stuck with problems which arise from today’s challenges such as digitalisation. So as we go through my presentation I would like you to think about what could help us understand whether there’s something that allows us to continuously innovate in education. For us at universities, but also perhaps as policy makers as well.

Now, let’s go back to our research. What did we do? We actually used this question by the Rockefeller Foundation as an invitation to probe the notion of innovation and to critically assess the possibility that there might be a hype of always associating innovation with good outcomes. But more importantly, it allowed us to actually specify the role of innovation in creating societal and social impact. And finally, it allowed us to stimulate learning by identifying particular pathologies that derail organisations from a productive path of linking innovation and scaling, which I will come back to that in a second.

**THE HISTORY OF INNOVATION**

Coming back to this probing of innovation, interestingly enough, today, we associate innovation very much with something positive. How it’s desired, it’s something that we all strive for. But if you go back and look at how innovation as a concept has evolved over the last centuries, you might find it surprising that in the Middle Ages, it had a very negative connotation. This journey was very-well documented by Benoit Godin in a lovely book, “The History of the Concept of Innovation”, that allows us to understand how in the Middle Ages, innovation was associated negatively, which mainly came from the religious domain, where the church was actually going after innovators. This was adopted by the political sphere. In the United Kingdom innovators
were almost put in jail. And then, with the Industrial Revolution and with scholars such as Schumpeter, we observed a turn. Today, as most of you also probably do, innovation is perceived as something positive and something desired.

THE DIFFICULTY OF INNOVATION
My favourite scholar, Jim March, a colleague at Stanford University, reminds us constantly that we should not overdo it with innovation as most new ideas are bad ideas. Well, this was an invitation for us to probe and unpack innovation as a concept when we talk about addressing societal challenges. And, in a piece that we also published in the magazine that I’m the academic editor of - Stanford Social Innovation Review - we actually tried to, not necessarily in a critical but rather constructive way, understand whether we are overdoing it when depicting innovation as the Holy Grail to generate social impact. So in this piece we make three points that we very often overrate the value of innovation. When we talk about creating positive social change or social impact, we often undervalue the importance of failed innovation. And we underappreciate the difficulty of innovation. Today I will stick more to this third point and I would also like us to adopt - for a second - the conceptualisation of innovation as a process rather than a particular outcome. If we look at innovation as a process, it’s much easier to see how difficult innovation actually is. Doing innovation is hard. Put yourself in the shoes of someone who tries to innovate in an organisation. So this is very much an organisational lens. No matter where you are, in a university or in a public agency, in a government or in a corporation, you might be familiar with such a process if you have been trying to innovate. This is just a snapshot. “We need help.”; “I have an idea.”; “Sounds great.”; “It works, the customers like it.”; “It’s not proprietary.”; “Yes, it is, the field trial worked.”; “Costs are too high.”; “Failure in the field trial.”; “We have a fix, it works.” And so on, and so on. This was actually very much the same roller coaster that we have identified in the organisations we were able to study for the book. And again, what we were trying to understand is the role innovation
plays in achieving social impact. For that purpose, we have looked at the innovation journey of four distinct organisations and in all of these organisations innovation as a process had a similar look.

What we realised is that the process of innovation very much offers you a mechanism to learn. So, in the organisations that we studied, it was never really about the new product or the new service that came out of the day, but it was very much the learning along the way that allowed the organisation to become better. What we provocatively say is: “If you don’t know how to learn, do not innovate.” Also, this rollercoaster allows you to understand that, in the space of social innovation, for organisations which try to address societal challenges, innovation is a means to learn and to address a number of uncertainties. If you are addressing a societal challenge, for example, you try to improve sanitation in India, then you as an organisation will face a variety of uncertainties. The first one is: Do you really have the right problem frame? Is the lack of sanitation in India a technical problem because we don’t have enough toilets? Or is it a relational problem? Because the social practice of open defecation is very much ingrained in culture, in religion, in the caste system. So, do you have the right problem frame to actually deal with a particular problem? Or - with the innovation that you focus on - do you assess the problem in the right way? Do you have the appropriate solution? Will your target group actually apply the particular solution that you put forward? Will it be adopted? Similarly, are there unintended consequences? Does it fit your identity, your sense of a mission? And how is it related to the long-term strategy that you are pursuing?

**INNOVATION IN THE EDUCATIONAL SECTOR**

Now, in the case of education, I think you can make a similar exercise, depending on who you are. Is the particular innovation that you come about an issue of a technical problem? Is it about using the latest technology to change a particular way of, for example, teaching? Or is it a relational issue? Is it how teachers and students interact? Is it an appropriate solution? Will it be adopted? Will students or teachers
actually be willing to adopt the particular innovation that you come up with? What are unintended consequences? Take the Millennium Development Goals, for example, we did have specific goals for education. There are intended, or probably unintended consequences if you prioritise primary education as a Millennium Development Goal over secondary education because you put focus on one particular category of education and you neglect another one. All these types of uncertainty are also coming to mind when we discuss innovation in the educational sector.

THE INTERACTION OF INNOVATION AND SCALING
Now, let me come to the main gist of this presentation and also of the book. We look at the exact role of innovation in creating impact by clarifying that innovation is not the direct way to create impact. Innovation is hard. It leads to uncertain outcomes because you face these six dimensions of uncertainty. You cannot count on actually coming up with a new process or a new service. You might. So, we like to look at innovation as an investment. It is also costly. What creates impact or what turns investment into impact is scaling. And scaling is this productive space where you actually make sure that you turn innovation into impact by becoming bigger, but also - and very importantly - by becoming better. The way we define scaling here is the increase in volume and size but more importantly becoming better in terms of quality and productivity. Most of the value is actually created by constantly improving, tinkering and tweaking rather than the big radical innovation. This might be less sexy and this is also very often connected with blood, sweat and tears. It means hard work - routine work that really allows you to create impact from an innovation. This is again very much from the perspective of a particular organisation trying to understand how two distinct organisational processes - innovation and scaling - hang together in order to create impact. In the discourse, in the field of social innovation, we often talk about innovation, or we talk about scaling. That’s also how funders and supporters typically think about this. We fund innovation, or we fund scaling. In this book, we
wanted to make sure that we understand that both processes have to hang together in order to create a productive path for impact.

**THE PATHOLOGIES OF INNOVATION**

Now, what can go wrong? This is something that we wanted to unpack and so we introduced the concept of innovation pathologies. Again, as I mentioned, innovation is hard, hard work. Creating impact from innovation is even harder. I would like you to put yourself in the shoes of an organisation, but also try to open this up and understand: What if we look at this from the perspective of an educational system? What we tried to understand was: What are factors that derail an organisation from the productive path of linking innovation and scaling? Obviously it was very helpful for our work that we had a long history with the organisations that we studied as we have been working with and on them for 15 years. The four organisations that we studied in the book are based in India and in Bangladesh. They have all had a 30 year long organisational history. And working for them for such a long time allowed us to develop a level of trust so that we could unpack what works and what doesn’t. That was very helpful to actually tease out pathologies. Today I introduce six generic pathologies that are by no means a comprehensive picture but they should allow us to have some ideas about going forward and how to exactly transfer that knowledge to education.

**NEVER GETTING STARTED**

Now, one pathology refers to never getting started with innovation. Think about an organisation in the social sector that has been doing the same intervention for a long time. The reason for that is that there is an enormous need for that intervention so they have to do more of it. And they are simply very good in what they are doing. They create enormous impact by actually just doing what they’re doing and they never get started with a new innovation. You might say that’s fair enough. But, think also about the organisation per se. Every organisation is inhabited by people like you and me. Doing the same thing over
and over is drawing energy. So, innovation often also has an important role in motivating people by allowing them to tinker with something new. Even if you are very good in what you are doing, even if you know exactly what you are doing, the capacity to innovate is to be cherished because it allows people to grow and to do something differently. It keeps your motivation up.

**TOO MANY IDEAS**

Another pathology is that you are an organisation which has too many good ideas. Think about a founder who comes to the office every morning with thirty new ideas. That might be too much for a team to absorb because they really have to get going and make sure to actually turn an innovation around and push from the red zone into the green zone, really trying to get impact. Personally, I probably have ten new ideas every morning when I shower. By the time I have my first coffee, maybe two of them seem to be reasonable. Too many ideas getting pushed means that you can never actually invest or get bigger and better. So you leave a lot of impact on the table because you’re constantly trying to innovate and overinvest in innovation. That is also a pathology we observe.

**STOPPING TOO EARLY**

Another set of pathologies is when you stop too early. You make all the investment but you never really come up and are able to enter the green zone. It is a pathology that we find quite often in social enterprises or in organisations in the social sector. One dominant cause of this - and there are probably many causes - is that funders cut the money at the very critical moment. The organisation might have found the first kind of ideas but then funding is cut. The last two years we had a situation here in Germany in which foundations decided to fund organisations that have a particular angle on refugee work. This meant that if you were a social enterprise or a non-profit organisation doing other work, the likelihood that you had to stop early was very high because you didn’t receive the necessary funding anymore.
STOPPING TOO LATE
A parallel pathology is that you stop too late. Think about the same example. You get funding for refugee work, the world trusts you but you yourself are cognizant that this is not the innovation that is going to enter the green zone. However, you don’t dare to say “We stop now.” On a more global scene, we have one factor that contributes to this pathology which is the rise of funders that actually give a very substantial amount of money, for example the Bill and Melinda Gates Foundation, which is a big funder in the educational space. Very often, it is the first time for organisations which obtain funding from the Bill and Melinda Gates Foundation to get a really big amount of funding. Also here they don’t dare to say: “Well, we thought this was a good idea but we should probably stop it.” So they carry it on for too long and therefore they never reach the green zone.

STARTING TOO EARLY
One more pathology is when you innovate too soon. You also don’t make it to the green zone but you start with the process of innovation, the process of actual investment, too early. That also happens very often because we associate innovation with something positive. Funders want to see the term, the label ‘innovation’, four times in their grant proposal and therefore, you start innovating too soon.

NOT ENOUGH HARD WORK
The final pathology can be insufficient exploitation. Basically, you do not perform enough work in the green zone. You don’t work hard enough to actually become better, to improve. Also here, you limit yourself to a part of the green zone but you do not exploit the full potential of the impact you could have. Why is that important? I mentioned it before. Scaling is super important for you to learn and to become much better also in the next round of innovation. If you scale, if you become bigger by reaching more people but also by having better quality, you will understand your target group much better. That could also be applied to the educational sphere. Therefore, you will become
much better in innovating because you have many more cues to understand your organisation, to allow you to understand early on what will resonate with your target group, whether it’s students or teachers in the case of higher education institutions.

**HOW TO DEAL WITH PATHOLOGIES**

We very often do a pathology workshop with participants from both, the private and the social sector and increasingly with organisations from the public sector. We allow the participants to turn to their organisational realities and reflect about what some of the pathologies in their organisation are that derail them from a productive path. And again, there’s nothing wrong with pathologies. Every organisation has them. The important thing is that you are cognizant about what is going on in your organisation, that you are able to reflect on that, and that you try to suppress it. All of the organisations that we studied have pathologies but they found a particular way to make sure that these pathologies can be, in a way, suppressed. Participants find this very liberating because it allows them to reflect and share insights on a particular culture. This is something you can do yourself. We have published this idea in the book but also in a free online article in the Stanford Social Innovation Review that allows you to do that.

In the case of higher education, you could use this particular framework to look inside the specific organisation that you inhabit, whether it’s a university or a NGO that tries to come up with an innovation. Or if you are in charge of policy making and you can think of some of the pathologies that relate to your work. More importantly, I do hope that this talk allows us to understand the role of innovation in education, in higher education and in other forms of education.
QUESTION AND ANSWER SESSION
Ulrich Grothus, Deputy Secretary General, German Academic Exchange Service:
What is the basis of the insights you’ve presented, so what kinds of organisations have you studied? You mentioned they were in South Asia, but were they companies or social organisations, would you just briefly elaborate on that?

Johanna Mair:
Sure, I am delighted to talk more about this research. We studied organisations that we often call social enterprises. They are NGOs, they are four organisations. Two in India, one is the Aravind Eye Hospital and one is Gram Vikas in India. The third one is BRAC, the largest NGO in the world in Bangladesh and the fourth was Waste Concern in Bangladesh. We tried to make sure that people understand that innovation and scaling are two processes which hang together in different ways. So, there are actually four archetypes that we identify in these particular settings. For example, Gram Vikas, that’s an organisation which improves water and sanitation infrastructure, it’s known for that. But actually, their innovation journey was very much a journey of learning from failed innovation. Their ambition is to address inequality, deeply entrenched patterns of inequality in rural India. They have tinkered with different ideas over time. For example, they started out with a particular program that was very popular in the 80s and 70s: irrigation of land for which they used money from the World Bank. They said: “Let’s give landowners a means to irrigate their lands and in exchange, they will give us land for those that don’t own land.” You can imagine what happened, land was irrigated, harvests went up and no land was transferred. So, they thought: “Well then let’s move to the most marginalised people in rural India, tribal villages, and bring dairy to their villages.” Again, money from the World Bank was used but tribal villages do not drink milk, they don’t milk cows, so that was also a failed innovation. They thought, well there’s a lot of dung, let’s
do biogas. Biogas was a huge success. They reached 500 villages and they made a very brave decision. They stopped producing biogas because it didn’t allow them to actually address the issues they wanted to tackle as an organisation that tried to fight inequality. So they stopped that, but over time they really understood how villages and inequality worked and that allowed them to come up with an intervention, water and sanitation infrastructure, that allows them to keep the eye on the ball of villagers, on building infrastructure, water and sanitation that everybody wants. But in the background, they are able to fight inequality because they have a very sophisticated design that requires 100% of the village to be on board for doing this. They break down the power structures and so on.

So, in all of these four organisations, innovation and scaling plays a different role. For example, at the Aravind Eye Hospital, they have a problem frame concerning cataract eye surgery. So it’s a technical problem. Their way of innovating is to innovate every time they face a bottleneck in their organisation. That is very efficient. For example, for cataract eye surgery, you need an intraocular lens, in the 80s they got them for free. Then, Johnson & Johnson said “We don’t give them for free”. What did they do? They created a manufacturing unit for intraocular lenses. So here, innovation plays a completely different role.

And in BRAC, they think about innovation by focusing very much on transforming the lives of individual women in rural Bangladesh. They give women education, human rights, microfinance, they also innovate very differently. But in all the organisations that we studied, they were very explicit on how they can learn from actual innovation. And that is also one of the insights of the book - look at innovation very much as a learning exercise.

Rajachandran Madhan, Counsellor in Science and Technology, Embassy of India:
I always thought there are some people who are born innovators. And the others are innovators because of their education and upbringing. Are you aware of any statistics that links the quality of primary
education to innovation? How important is the quality of primary education for innovation?

**Johanna Mair:**
That’s a very interesting question. I think to have a substantive answer to this, you would need to qualify what you mean by innovation. How would you measure innovation? For you, would it be the number of patents someone creates? Would it be the number of new organisations created in the sense of entrepreneurship? The reason why I’m saying this is that in innovation studies, we are very much hindered by how we measure innovation. In management and organisational theory, we were stuck with the metrics of using patents as the measure of innovation for a long time. That is one particular way of looking at it. It would probably not help us to understand innovation that addresses societal challenges. I’m sure there are some studies that look at that - I’m not aware of it - but I’m sure they can be found.

My invitation to you would be to critically assess what the metrics is that is used to operationalise the dependent variable, as we call it in research, which is innovation in this case. Because that will give you part of the picture and if you try to understand innovation as measured in patents, you probably have some effects that might not be relevant if you are interested in innovation that relates to social innovation. That is the caveat that I would like to point out here.

**Nina Mikolaschek, Strategy Officer Central International Initiatives, Humboldt-Universität zu Berlin:**
One question from the perspective of the International Strategy Office because basically, we also innovate every day. We try to improve internationalisation. Do you have any impulse for us that you maybe have thought of lately, or something you’ve seen in similar structures?

**Johanna Mair:**
The reason why I personally thought that this talk might be interesting for an educational expert crowd is because we are actually talking
about innovation in educational law, both in social innovation but also at the policy level. In almost every university, we try to experiment and tinker with innovation, be it with active learning versus classroom learning or with bringing in new technologies. I think it is important to understand that this particular framework also allows you to think clearly about what it means if you bring a particular innovation or new process to Germany. Is it appropriate here? Will it be adopted? What kind of uncertainties do you face here? We are often very quick in terms of adopting something that worked somewhere else but as in any social innovation, the critical point is always to adapt it to the local circumstances. It’s very human to think that if we found a solution to address an educational or any issue in Bangladesh, we could bring it to Uganda. But we often underestimate that also scaling, for example, is very different in Bangladesh compared to Uganda. The same with Teach For America, a social innovation in the educational domain. It started as Teach For America, followed by Teach for All and Teach First, it is replicated in almost every country today. Huge differences across different contexts. Why? Because a concept such as Teach for All, which is a way to motivate university students to spend two years of their life teaching in very difficult environments, in Germany is very different, since here, university students cannot just go and teach. Also, it has a very different role, depending on the city or which societal challenges particular communities are exposed to.

Again, innovation needs to be critically assessed, it needs to be probed with the context where it takes place, and I think that’s an understanding that not only universities need to develop but also policy makers, foundations, and the people who actually do and live education. That is one of the things that I think is very helpful to bear in mind.

Sigward von Laue, Deputy Head of Research Coordination, Robert Koch Institut:
I have a question regarding the dimensions of your model. Impact and investment are opposites. Is this only true for economic innovation?
Because I can think of hundreds of examples - I’ve worked for four years in Africa in NGOs where investment and impact are not opposites but go along with each other. Lots of innovations die because their investment stops and the impact is only to be achieved by more investment. So is this only true for economic innovation or does it also apply to social innovation or other dimensions?

Johanna Mair:
Our examples are about social innovation. Of course they go together - but our point is that if you just innovate, that’s costly. And I’m not just talking about financials. I’m talking about the emotional investment of people. If you innovate in the social sector and for a long time you have nothing to show, that’s costly, also for people. So in order to actually create some impact on the ground, you have to make sure that a new particular process or a new product that you come up with is actually hitting the ground and reaching the target group, for example in Africa. And this is what we mean here. Look at them as two distinct processes but mind that they hang together in order to create impact.
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