unfolding human potential

Chapter 4

'Attempts to reunite Romeo and Juliet – educational practice and educational science'

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(day 2, transcript by Maartje Janssens)

Educational research as Romeo and Juliet
There's something very wrong with educational research. I'm reading this book now, *Free to learn*, from Peter Gray. It's really one of the best books I've come across in a couple of years. Gray is an evolutionary psychologist. He tries to understand human learning almost from an anthropologist point of view. This book shows how research and thinking about education should be combined. It's personal and scientific. And it's a book. But that doensn't count anymore in the system that has trapped us as researchers. Educational research has become a Romeo and Juliet story. The educational practice is Romeo, and research is Juliet. They love each other and they should work together. Especially now that many people think this system sinking of traditional education is going on. You would want to build it on insights coming from educational science. You would want to have teachers like in Singapore, who work together with researchers, come up with new ideas and get inspired. But it doesn't work anymore. And it's really bad.

The case of Diederik Stapel
I will tell a small anecdote. It's about a researcher called Diederik Stapel. He really was the big shot in The Netherlands. Everybody knew him. He was in papers, journals and on television all the time. He did great research. He was one of the top publishers in this very competitive world that research had become, in this case: social or educational psychology. Many PhD students worked for him. Stapel already collected the data for his students. They only had to analyze it. Each time they got brilliant results. It worked perfectly, and this went on for years. Then the following happened. One day, a PhD student was complaining to another PhD student, saying: 'I had such a lousy day, there was a mistake in the data file I got from Diederik, something was wrongly coded. A little error, but it costed me a lot

of work to change it.' 'That's funny', said the other PhD researcher. 'I had exactly the same mistake in the file I got from him'. Which was a completely different research, from a different population, from a different school. So they started comparing the data files, and they found out that lots of it was copied. They talked to other PhD students, started looking at their data, and found out that the data were fake. So these perfect brilliant outcomes that he had, were simply build in the data. The PhD students didn't know what to do because universities are usually very hierarchical. A guy like Stapel can and will break your career if you resist him. However, the students went to the head of the university, who had the courage to look into this problem and start a research. It ended up that a lot of Stapels research was built on fake data. That caused a lot of turmoil, it was on the head of the newspapers. But what's important for here, is to question how this could derail so badly.

Positive publication bias and pseudo-science

Why would he take the risk to invent data? Because we have a positive publication bias. Positive results get more published in scientific journals, than vague results – or even negative results. Furthermore, to make a career in research, you need the format of an article about 8000 words. So the fact that schools are very complex places isn't very fortunate for educational researchers trying to play, let's say, someone who researches nuclear power plants. You see the problem? To make a career in (educational) science, to become a professor, you need to reduce the complexity to a format that fits with a few variables to make it so-called 'scientifically'. And moreover, it's preferred to have a positive outcomes. I've seen it so often that PhD students went to three schools for their research on a certain concept, and then they told me: 'We found positive results at two schools, but the third school – hm, it's a bit vague. Shall we leave it out?' This happens very often. Negative, or results that are difficult to understand, are let out. All quantitative research is about the question: is it coincidence what I found, or not? If you start doing this, you're creating nothing else but pseudo-science. It's really a big problem, and it shouldn't be underestimated.

From counting publications to contribution to society

That's what happened a few years ago. We needed Diederik Stapel to start off a big discussion in The Netherlands. People started asking what on earth these universities were doing. Are researchers really pushed to have positive results? There has been a very important reform now at universities. They're still trying to figure out the new way of saying: we stop counting publications. It's really an enormous difference. Most researchers haven't understood yet what this means. Researchers need to proof that they contribute to society, and try to find evidence for that. And if there's one strand of research for which this is good news, it's educational research – which used to be the most pathetic, small, ridicule by all other disciplines. Educational research in particular can really make a relevant contribution to society. At this symposium there are two people from NRO, an institute that promotes educational research spend on attempts to reunite Romeo and Juliet – educational practice and educational science. And so this very bad story turned into something good.

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