Brooks Law and the didactic deficit in the workshop method

By Professor Jan Willem de Graaf

Professor of Brain and Technology, Saxion University of Applied Sciences, Deventer, Netherlands

id you ever attend a contemporary workshop? Typically a workshop leader says he will keep the presentation short, a few minutes, and then put us to work. Then the few minutes turn out to take at least 20 minutes, filled with rather unsystematic chatting, after which the group is divided into 3 groups of 5 or 6 participants. In this blog I describe such typical workshop from my personal neurodiverse ("autistic") perspective.

Recently I attended a workshop on design thinking. The writer of a new textbook stated that his book could be read in any order. On page 1 we read that we should "design what people really want instead of making them want our design". We are then led to page 168, where we read that Henry Ford and Steve Jobs did exactly that, designing what people wanted ("faster horses" - Ford, and "all in one device" - Jobs). Frankly, I am happy when the "promised" 2 minutes become half an hour, but from browsing through the new book and the "threat" to start working in groups of 5 to 6 people, I soon lose track. I get stuck in "content". Did Ford and Jobs make what humanity wanted? I believe that they are very good examples of the first-mentioned principle: making people want your products. Both cars and smartphones turned out to be very addictive. They disrupted the existing order, and brought a whole new class of possibilities and even more problems, that nobody really wanted.

Stunned, I see the other participants obediently scrolling through the book and taking everything on face value, while I am now completely lost. If you write a textbook, I think, do it logically so that you start at page 1 and end at the last page. Knowing that I can't escape "working" in groups, for which I only have two roles (1. take the lead, 2. withdraw completely), I recalculate the number of relationships in a group of 5 and 6 people: 120 with 5 participants (5 faculty), 720 with 6 participants (6 faculty). In social terms alone, this is so complex that I cannot solve a problem in a targeted manner.

From experience I know that I'll even survive a workshop, everything passes. However, organizing education through this kind of "cooperation" and then expecting everyone to learn the same amount seems pretty imbecile to me. I hear the workshop leader explain that every design team must divide roles, a team captain, a criticaster, etc. I overcome my fear and ask if he doesn't think it could be psychologically damaging if someone would be pressed into the role of criticaster repeatedly. The room laughs, another interruption by that somewhat autistic colleague. The writer never thought of that. Of course not.

Then it gets too much for me, and I come up with an excuse, I really have to be somewhere else. Relieved I breathe, and to my noticeable surprise the leader and colleagues as well. Back to my office, it comes to mind: Brooks Law: if you add manpower to a delayed software project, the delay increases. Fred Brooks (IBM developer) spoke of the man-month: the more people you join, the greater the delay becomes, due to the need for parallelization and the practically impossible requirements that this places on communication. These requirements lead to a bottleneck.

More and more I am starting to realize that it is not merely my "limitation" that I do not feel optimally at home in the increasingly group-based education. In a sense, it is also a neurotypic bias with regard to underestimating the complexity of communication and overestimating the power of collaboration at every small step.

I believe in cooperation, but I think that individuals should also have the space to shape their own process and to prove themselves individually. Unfortunately there are no buses where everyone is at the wheel, but in the age of automation we can easily pretend that everyone is a manager