## **Educating 2.0**

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t is a good thing that I have a daughter who has just turned 10. My next child is 17 and those seven years make a huge difference in a world that is changing so quickly due to the availability of new technical products from multinationals. Three years ago we gave our youngest daughter both a smartphone and an IPad. Most of the time, the phone usually lays uncharged in a corner. But about a year ago her class created a group app on WhatsApp. If Pavlov had no bell and no dog, I would have invented the Pavlov reaction now. As soon as the ringtone indicates that there is a message, my daughter reacts. She is busy all day with the phone.

While we think she is safe on the couch - not dangerous, there are no cars inside and there are no unsavory types as far as I know - we see her becoming more and more nervous as soon as the charged phone is in her area. It's a repeating pattern. After a few days she becomes constantly irritable, and in tears she finally agrees that we put the phone away for a while (a few months). Yesterday my wife inspected the messages. It seems innocent, many emoticons, GIFs and short sentences, but it seems that children constantly block and unblock each other in a subtle way. The Hunger Games on the couch, and parents who know nothing about it ....

The above seems an innocent example of a number of disadvantages of technology. Of course, we the parents - must pay more attention. In this case, I plead guilty.

I admit, I am crazy about technology. But the largely unnoticed "In a local newspaper, a

power that multinationals (electronics giants, Google, Facebook, etc.) have in our lives, including upbringing and education, is too big. And like magic oil, digital techniques are good for everything. No condition is conceivable, or there is an app for it. Certainly, if there is none, there will soon be an app for parents that records exactly how often the child does what and with whom on the social media. A kind of parental control 2.0.

The virtual and the physical worlds

A few years ago the Sportbedrijf Deventer (a sports company in the town of Deventer) came up with a great initiative. My research group and I were enthusiastic and we participated by investigating how children can be motivated in the virtual (game) world to become active in the physical world. Even before we had ever heard of PokémonGo, we were already conducting

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experiments with our own version of Minecraft. In the physical world, children could collect points by walking and cycling. The pedometer in the smartphone closely monitored physical activity. The credit points could be used in our special version of MineCraft. The use of smart devices ensures that children do not exercise enough, which results in an increased risk of obesity, among other things, right? And MineCraft (a digital lego game) is fun for children, right?

No, Dad, that was three years ago, now everybody plays Fortnite. Now that we have finally reached the research funding and (ethical) committees, Minecraft is out of fashion in the cities where we carry out the experiment. Of course we can try to increase interest in Minecraft in the schools where the experiment takes place, so that we can investigate the relationship between credits in the virtual world and the desired behaviour in the physical world. But unlike multinationals, our budget is inadequate for hiring pop stars and influencers. In a local newspaper, a journalist notes that research money should not be used in attempts to combine physical and virtual reality with outdated games. Sorry, I forgot, as scientists we cannot keep up with the tech giants. How naive of me, we just have to leave both education and thinking about ethical issues to the multinationals!