

Technology and inclusiveness

By Professor Jan Willem de Graaf

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

Practically everything we do is mediated by technology. Completely dressed up, we walk in our shoes on paved roads, in dozens of neatly connected well-structured infrastructures; villages and cities. A human world without technology is almost unthinkable. Technology reduces distances, bridges oceans and connects continents. Architecture is also technology, and thus also our buildings, houses and furniture. But what does technology have to do with diversity?

Technology "produces" inequality in the possibilities for adaptation that each individual person has. From this inequality, the discussion about diversity has emerged. Stated very simple, imagine for instance a world without means of transport. There would be no bikes, cars, trains or anything else. People could only go on foot. We could walk, run, or jump, dance and play. Then it would be much less of a problem that, for example, a child sees or hears badly. Being overrun by cars or bicycles wouldn't be an issue. In the possibilities to walk and explore freely, the child could learn to navigate on the sensory systems that were in tact. Compensation strategies would perhaps even make a person become extra sensitive.

But our world is complexly machined. For people who are slightly different, there is certainly less room for manoeuvre. This also applies to children who learn differently - better or worse - than other children. Our education systems are meticulously and complexly organized for the average child. In this context it is a very challenging thought that a child who is doing very well at school is in fact a very average child. From the cradle to the grave we are enrolled in a complex technological context, in which education can be seen as a high-tech environment through and through. Not only are the schools full of technology, but the methodologies used are to be regarded as complex human constructions and thus as technology.

So technology gives us all knowledge, extra hands, feet, and through airplanes even wings, literally and figuratively. It protects us and at the same time puts us at risk. Through technology our actions increase enormously in decisiveness: a hammer is stronger than a fist, a car is faster than we can ever be. As a consequence, the distance between people who can and cannot adapt to technology has also increased. The same applies to the distance between people who do or do not have access to technology. Even the distinction between poor and rich in the world is in part a matter of "to have or to have not" (to cite Gavin Friday): whether or not to have easy access to the most advanced technology of the moment.

The chance of accidental findings, serendipity, decreases if we have less free space. Already as small children, we learn to perform in pre-programmed tasks. We learn to work with smart technology, game consoles, and tablets to achieve credit points or high scores. We can rarely explore and discover freely. Elsewhere I have spoken of our stolen childhood by technology. But education can stand for social connection. For a world that is getting richer, in which more colours are accepted. Also, a world in which neurodiversity plays a key role. A world in which educational programs start from an in-depth understanding of target groups, guaranteeing that users are involved as co-designers in the development of new methods that restore and support inclusiveness.

Man is a social being. Technology offers opportunities to provide the technology-created gaps between people who can and can not adapt to the standard versions of technology, with specially equipped versions. Technology for the visually impaired, technology to help social anxiety, technology to teach the deaf to "understand" language, etc. There are many possibilities. There are opportunities for educational professionals to help develop technology that contributes to an inclusive society. Behaviour and technology are inextricably linked. Educational professionals and psychologists who ignore technology - both in the problems caused by poor adaptation, and in the possibilities that it offers to come across limitations - deprive themselves of an important role in the future. Perhaps one may find that behaviour and technology as a subject is not that interesting yet. But it is here that there is room for serendipity, and strangely enough it is still largely unexplored territory. To you the challenge: make the future!