A Conceptual Model of Factors Leading to the Inclusion of People with Neurodevelopmental Disorders in the Digital World

Claude Normand[*1], Dany Lussier-Desrochers[2], Stéphanie Fecteau[1], Valérie Godin-Tremblay[2], Marie-Ève Dupont[2], Jeannie Roux[2], Martin Caouette[2], and Alejandro Romero[3]

[1]Université du Quebec en Outaouais (UQO) – Canada
[2]Université du Québec à Trois-Rivières (UQTR) – Canada
[3]Université du Québec à Montréal (UQAM) – Canada

Abstract

The development of Internet has revolutionized the way humans interact, online as well as offline. In the words of Tim Berners-Lee, "the power of the Web is in its universality. Access by everyone regardless of disability is an essential aspect." However, people with neurodevelopmental disorders (i.e. intellectual disability or autism spectrum disorder) share sensorimotor, cognitive or social impairments that limit accessibility to the WWW and their use of Internet, thereby reducing their potential for social participation in this virtual community. Our study aims to build a model of factors that could facilitate inclusion in the digital world for people with ID or ASD.
A review of the literature was performed to identify factors associated with digital exclusion of people with neurodevelopmental disorders.

This analysis led to the creation of a digital accessibility pyramid, comprising five levels: 1- access to digital devices, 2- sensorimotor skills, 3- cognitive skills, 4- technical skills, 5- social skills. Progression in the pyramid is based on the premise that to ensure optimal use of the information and communication technologies, people must develop the necessary skills or receive the necessary support from their environment to attain each level from the bottom up. Ethical and psychosocial issues permeate each of these levels, leading to the addition of a transversal dimension to the model.
By addressing these issues, we could ensure the digital social participation not only of people with ID/ASD but other disabilities as well.

Keywords: Internet, digital divide, accessibility, social participation, intellectual disability, autism spectrum disorder

---

[*]Speaker