

Young gamers are inventing their own controllers to get around their disabilities

April 18 2017, by David Wästerfors



Credit: AbleGamers Foundation

Nintendo's latest gaming device is unique. It can operate like a traditional home console, a tablet or a handheld gaming unit complete with miniature joystick. But for gamers with disabilities, the Nintendo Switch may still have many of the same problems as any other console. Yet some of these young gamers are inventing their own ways to get around the challenges of using devices not designed to meet their needs.

[We interviewed](#) 15 [young people](#) with [disabilities](#) to find out about their everyday gaming habits. The gamers in the study were living with various disabilities – including muscle diseases, cerebral palsy, and Asperger's syndrome – that can often hinder or interfere with the gameplay.

For example, many games require users to quickly and repeatedly press buttons on their controllers. Intensively repeated actions can be hard to accomplish for people with a [muscle disease](#), making it impossible for them to proceed in these games. The mere speed of some games can be another issue, as well as an abundance of information that some games throw up.

The gamers in our study were using a range of strategies, including some particularly innovative ideas, to overcome these issues. Some games were ruled out from the start, perceived as too speedy, too hectic or harbouring too many difficult sections. Others could be managed with the help of a friend or assistant who can take over control of the game for a short period to complete the hardest tasks, a kind of vicarious gamer.



Faster control. Credit: AbleGamers Foundation

The gamers were also careful about who they played with, with some preferring to play only with people who knew them and didn't make a big deal of their disabilities. They preferred to play with people who were relaxed about the occasional difficulties disabilities can create, and who didn't react in a way that spoiled the fun.

But [in some cases](#), our gamers had gone a step further and developed their own ways to control the games. For example, one gamer, paralysed from the neck down after an accident, invented a new soft keyboard that allowed him to keep up with the speed of his favourite games. A soft keyboard is an onscreen keyboard, replacing the hardware keyboard with

a clickable image on the display.

By combining this with a headmouse, which translates the movements of the user's head into proportional mouse pointer movements, he could use this soft keyboard to control the game. For example, by programming his computer to read one click from his headmouse as 15 from a normal mouse, he could sustain his pace in the games and keep up with other players.

Another gamer rebuilt the controller of his console so that he could steer the games with his feet. Instead of holding a controller in his hands, he used a set of big buttons laid out on the floor. In this way he could avoid the troubles caused by his body's involuntarily muscle contractions (spasticity). These can cause sudden stiffness or tightness, in this case especially affecting his upper body, so it was easier for him to control the game with his feet rather than his hands.



Widening participation. Credit: AbleGamers Foundation

Safe haven

Why is playing video games so important to these young people that they would go to the trouble of inventing these alternative controllers? Several of the gamers [we interviewed](#) said games were an especially valuable safe haven that helped them manage their everyday lives and the challenges they faced. The gamers talked about enjoying "a deep story" within the games, that it was "a way to "close off" other things, an "escape" or "salvation".

This is similar to the experience of other gamers, but disability

sometimes adds an extra twist. A game's well-crafted universe can be particularly attractive when disabilities create issues in real life, for instance in periods when friends abandon you because you are using a wheelchair. Some gamers even said that a video game can be seen as a metaphor for a life full of everyday fights. One gamer, living with a deteriorating muscle disease, said that the games are constantly "reminding oneself that you need to fight to succeed, especially us with difficult diagnoses".

Despite the importance of video games to young people with disabilities, the games industry has only partially acknowledged them. For example, a [gamer](#) can often adjust difficulty levels to match his or her wanted level of challenge. But with more flexible speed settings and available shortcuts in the games, many gamers with disabilities would find better options.

The games industry would also benefit from more diversity in the worlds of its [game](#), with more figures with various disabilities. This would attract people to the games that today do not always feel at home with them, and help open the challenges and safe haven games can provide to even more people with disabilities.

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