



Digi Teachers Working Online Toolkit

Nesplora

WHY: The project involves the use of virtual reality for neuropsychological assessment in individuals with ID (Intellectual Disability) or ASD (Autism Spectrum Disorder). The tool being used is Nesplora, a software that assesses executive functions, attention, and memory through various activities in virtual environments. The main objectives are: to assess the cognitive functioning of the individuals we support functional and real-life environments, and to gather performance variables in tasks that will enable us to enhance the support provided to these individuals.

WHO: It is designed for neurotypical population, and we consider it useful for individuals with ASD level 1 or those with borderline intelligence or mild intellectual disability. Due to the skills required (good verbal comprehension, psychomotor coordination, tolerance for unexpected events or errors), it is not considered suitable for individuals requiring more support or exhibiting concerning behaviors. It is not suitable for individuals with little or no interest in technology.

WHAT: It allows for a much more realistic assessment of each person's cognitive functioning, which can be helpful in adapting supports, environments, or activities to match their cognitive profile. Unlike classic neuropsychological tests that use less functional tasks, Nesplora provides highly realistic situations.

WHICH: For the individual engaging in the activity, they use virtual reality glasses, controllers to perform tasks within the virtual environment, and headphones to hear instructions.

The evaluator needs to have the software for the various tests on a laptop. From there, they initiate the task and can observe, in real-time, the execution of each activity on the computer screen (seeing exactly what the individual sees through the glasses).

HOW: We began testing with individuals diagnosed with ASD level 1, individuals with mild ID or borderline intelligence, and several with moderate intellectual disabilities, some of whom exhibited concerning behaviors. We initially targeted around 10 to 12 individuals due to each Nesplora test requiring approximately 45 minutes for execution and its high cost (both in software acquisition and VR technology). We considered focusing on individuals needing certificate renewal, where this test could be useful in aiding assessment, for those whose orientation is unclear, or those experiencing difficulties in their current activities at Esment. However, it did not work well with individuals presenting moderate ID or concerning behaviors. Despite adapting the instructions, they struggled to comprehend or became frustrated upon making mistakes. Three individuals even abandoned the task. Recommendation: initiate with individuals highly motivated and likely to use the technology effectively.

