

tools having solid scientific foundations. This way, the LearnEnjoy apps give the users (i.e. the “teachers”) the possibilities of teaching in a progressive and coherent way, different skills such as language (receptive, expressive), imitation, play and motricity, cognitive, academic skills or even independence skills. They also allow the progress in each area to be shared with the parents and the whole team, a necessary feature for the implementation of global and coordinated interventions. Finally, and maybe more importantly, these applications were created so as to specifically foster the contact between the person with autism and the “teacher”. This way the apps, at the same time, reduce the risk of pervasiveness of the tactile tablet, while favouring, just as much for the person with autism than for the accompanying person, the development of a positive, structured and structuring social relationship.

Keywords Autism; Tablet; Skills; Teaching; App; ABA

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S31B

Improving executive function skills in children with autism spectrum disorder: The example of a new executive training protocol based on LearnEnjoy digital apps

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Children with autism spectrum disorder (ASD) have serious difficulties to ignore visual and auditory distractors, or to inhibit ongoing activity on behalf of a new one, or to extract themselves from a routine. Such so-called executive functions enable us to control ourselves and to consider things from multiple points of view. They also involve paying attention, remembering what we need to remember to pursue our goals, thinking flexibly and not going on automatic, exercising inhibition. Then, the observed executive inefficiency of ASD [1,2] could be one of the main cause of perseverating behaviors in daily life and school activities. If the question of the efficient evolution of these executive functions from childhood to neurotypical adulthood has been addressed in many cognitive development researches, very few studies have focused on the atypical development of ASD patients. Following Diamond et al. [3], it is important to note that beyond acquiring always more knowledge, it is crucial to be able to inhibit reactions that get in the way of learning something new. Using preliminary data, we will explain how LearnEnjoy apps could become an essential basis of an innovative experimental paradigm, aiming at a better understanding of the atypical executive development of school-age ASD children. Based on new executive digital apps such as Stroop or Flanker Tasks testing for executive inhibition, the main goal of this scientific project is to show evidence of the possibility of executive training in children with ASD. As executive function skills predict

children's success in life and in school [4], such a new scientific study should allow us to envisage creating innovative remediation protocols for improving the deliberate, goal-directed control of behavior of ASD patients.

Keywords Children; Cognitive development; Autism spectrum disorder; Executive functions; Digital teaching tools

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S31C

A digital tool for deploying best practices and promoting inclusive education

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Parents of children with cognitive disabilities and professionals from specialized institutions both face a lack of adapted educational tools for these children. Dealing with this situation, one parent has set up a collaborative project to create digital tools based on the latest advances of the scientific research. Recent studies have shown the appetite of these children for digital supports, with increased motivation and attention with tablet support compared to classic support. Starting from this observation, a team of ABA psychologists, speech therapists, teachers and IT engineers has designed a multidisciplinary tool, which has been tested by parents and professionals from specialized institutions. We will present two projects, one that took place in institutions, the other that took place in schools. These two projects aimed to assess how digital tools can be used for deploying the best practices and promoting inclusive education, in line with scientific research. LearnEnjoy proposed a pilot project between October 2013 and October 2014 in connection with 22 specialized institutions and volunteer families. This experimentation showed that tablets and the LearnEnjoy educational applications create a dynamic in professional teams, between parents and professionals, and between professionals and service users. This device provides additional structuring of work and facilitates the transmission of information. It also helps to spread the culture of evaluation within specialized institutions. LearnEnjoy also worked in collaboration with the French Education Ministry for the project Educare. This project aimed to support the inclusive school and individual monitoring, through regular monitoring of student progress and the establishment of an adapted school report book respectful of the National Education program. This project took place in 13 structures, ordinary and specialized classes. This experimentation showed that LearnEnjoy educational applications are beneficial for both students and teachers and create a positive dynamic in the classroom.

Keywords Digital; App; Recommended practices; Autism; Developmental disabilities

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