

# **REALITY – Evaluation of a training course using incarnate virtual reality to raise awareness of autism and inclusive practices among university teaching and administrative staff**

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## *Context*

In France, autism is thought to affect around 600 000 adults, but this number is likely under-estimated. However, France falls behind in professional training of autistic adults. Around 50% of autistic person is said to have an intellectual capacity allowing them to pursue higher education. This education is not pursued without any difficulties and needs adjustments.

To obtain support, autistic students must reveal their diagnostic but fear to be stigmatized. Also, university staff and teachers generally do not receive training on autism and inclusive practices at university. Yet, international literature recommends raising awareness among university staff, by focusing on experimentation with concrete situations. New immersive technologies, like incarnate virtual reality (RVI), allow these new experiential learning perspectives. RVI is more and more used for training since she favors empathy and lowers implicit prejudices.

## *Objectives*

Given the advantages offered by RVI for training and the little information resources on autism in higher education, our goal is to try this innovative training to raise awareness on autism using RVI among university staff, evaluating its effects on knowledge, beliefs and actions associated with autism and inclusive practices. It is a participatory research project, involving researchers with expertise in Humanities and in the autism field, with experiences with new technologies, as well as with field players, expert-students and expert-professionals. Atypie-friendly is also a partner of the project (access to the field), and the project is supported by the Autism and NDD GIS.

## *Methods*

A first funding opportunity allowed the project to start in 2021 and a second, obtained at the end of 2023 offers the opportunity to pursue the project until January 2025. The project is made of three studies whose methodology lies on the ORBIT model (Czajkowski et al., 2015) of development and evaluation in a non-medicated intervention, recognized

and used in Humanities and at an international level. The study 1 (underway) aims at identifying needs and at defining and validating the content of the training. To do that, a thorough study of already existing literature was realized, as well as research interviews with autistic expert-students (McPeake et al., 2023) and university staff non-experts (articles submitted in 2023). The theoretical contents of the training will be assessed along the way of their creation by three members of the specialist consortium of autism and inclusive practices, to ensure their validity. To validate the RVI contents, collaborative workshops to produce these contents will be offered to autistic expert-students. To ensure the technical feasibility, we have organized in 2022/2023 two collaborative workshops and realized three prototypes of 360° RVI film. A training manual describing the different components of the training will be produced and will support the people who will administrate it (all deliverables - theoretical and IVR - scheduled for January 2025). At the end of this first study, the study 2 will offer a test drive of the training and a preliminary evaluation via a pilot study, on a small sample, with a pre/post-test protocol which will include two comparative conditions to ensure the results are linked to the specific effects of the 360° RVI film: 1) the training including short films (already developed by the “Atypie-Friendly” network) and 2) the training in a classic learning environment, without any RVI or short films. The methodology will rely on different evaluations: auto-questionnaires (ex: knowledge, beliefs and attitudes associated with ASD and inclusivity), implicit associations test (measuring stereotypes and implicit prejudices) and research interviews (exploring satisfaction of trained staff). Fidelity to the manual will also be evaluated in order to ensure the obtained results are linked to the training. Finally, the study 3 will offer a controlled and randomized test which will be done on a larger population (the size of the sample will depend on the size of the effect of study 2), with the same methodology as study 2 (without the research interviews).

### *Perspectives*

The benefits of the project should help battle beliefs and incorrect representations and favor university inclusivity of autistic students. Good practices recommendations will be offered.