

AC+Augmented caRer

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A therapeutic technology for patients with Autism Spectrum Disorder (ASD)

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Autism is a neurological disorder of high prevalence and high associated costs (special education, therapeutic and residential expenses)

- **Main problem** communication and understanding of concepts considered as basics for the rest of the population. *Most widespread way is pictograms*, graphic representations, which, alone or together, help to illustrate concepts and situations.
- **The challenge** the large amount of existing pictograms (+30,000) and their difficulty in expressing verbal actions make it difficult to communicate effectively and get the patient to integrate normally in their educational and social environment (Figure 1).



Figure 1 – Pictograms

Augmented Reality (AR) technology helps communication, providing a multimedia layer (e.g. video, audio or interactions) using tablets and smartphones over pictograms.



Figure 2 – Augmented CaRer

Augmented caRer → AR platform that allows users (parents, caregivers, etc.) easily superimpose multimedia content over pictograms to use with patients in their daily routine. This tool adapts *Augmented Class*^(*) technology to an environment of primary school with autistic students (Figure 2). During this study therapist used Augmented Carer with videos and animations in Science Education, specifically, to explain the Cycle of Water. ^(*)www.augmentedclass.com

- **Results** 100 % of patient attention, quicker response and higher interaction with classmates improving traditional teaching methods.
- **Next steps** simplified pictogram database with AR, widespread use for any age/level patients (2016-2017 term).