

## Robot-Assisted Learning for Communication-Care in Autism Intervention

**Authors :** Syamimi Shamsuddin, Hanafiah Yussof, Fazah Akhtar Hanapiah, Salina Mohamed, Nur Farah Farhan Jamil, Farhana Wan Yunus

**Abstract :** Robot-based intervention for children with autism is an evolving research niche in human-robot interaction (HRI). Recent studies in this area mostly covered the role of robots in the clinical and experimental setting. Our previous work had shown that interaction with a robot pose no adverse effects on the children. Also, the presence of the robot, together with specific modules of interaction was associated with less autistic behavior. Extending this impact on school-going children, interactions that are in-tune with special education lessons are needed. This methodological paper focuses on how a robot can be incorporated in a current learning environment for autistic children. Six interaction scenarios had been designed based on the existing syllabus to teach communication skills, using the Applied Behavior Analysis (ABA) technique as the framework. Development of the robotic experience in class also covers the required set-up involving participation from teachers. The actual research conduct involving autistic children, teachers and robot shall take place in the next phase.

**Keywords :** autism spectrum disorder, ASD, humanoid robot, communication skills, robot-assisted learning

**Conference Title :** ICSRD 2020 : International Conference on Scientific Research and Development

**Conference Location :** Chicago, United States

**Conference Dates :** December 12-13, 2020