Kaspar

Type of Project

Ongoing research project

Summary

KASPAR, a research project at TRACKS (autism), a specialist nursery for children aged between two and six who have complex social and communication disorders using KASPAR a humanoid robot. This research contributes to a bigger research project at the University of Hertfordshire. KASPAR acts as a social mediator encouraging children to interact and communicate with adults and other children. He is able to engage in a range of interactive play situations, such as turn-taking or shared eye-gaze activities. He demonstrates a range of simplified expressions without the complexities of a real human face.
At present TRACKS are collecting observations of children's interactions with KASPAR and monitor progress using a World Health Organisation document adapted to accommodate the Early Years Foundation Stage outcomes. Short video clips and photographs along with descriptive text of children's interactions provide evidence to support children's development particularly that which can be attributed directly to KASPAR.

The context of use

TRACKS (autism) is a specialist pre-school for children with social communication difficulties.Children attend, often alongside a mainstream placement, for 2 or 3, three and a half hour, sessions each week . Adults work from the child's interests and motivations to encourage shared play with peers. Every opportunity is taken to develop both social and communication skills appropriate to the child's developmental age. TRACKS has a high child:staff ratio with a maximum of 10 children each session and a minimum of 5 adults.

Type of play in this play system

Cognitive

Practice

Social

Associative
Cooperative

Objectives related to play according to ICF-CY

Play for the sake of play: Major life areas - d880 enagement in play

d8803 shared cooperative play
d8808 engagement in play, other specified
d8809 engagement in play, unspecified

Community social and civic life - d920 recreation and leisure time

d9200 play

Play-like activities: Therapeutic and educational objectives

b1 Mental functions
b2 Sensory functions and pain
b3 Voice and speech functions
d3 Communication
d7 Interpersonal interactions and relationships

Number of participants

5-10

Chronological Age

0-3 years
3-6 years

Development Age

0-3 years
3-6 years

LUDI Categories of disabilities

mild
moderate
severe
Communication disorders (speech and language disorders):
Autism Spectrum Disorders:

Explanation on the use of low-tech, high-tech devices, services or contexts

Explanation

Verbal instruction, language and communication is adapted
Visual instruction with pictures or drawings
Modeling by therapist/researcher
Prompting: therapist/researcher touches the participant as a key for further actions
Guided discovery: therapist/researcher coaches the participant so s/he discovers how to use the assistive technology

Involvement

Adult: therapist/educator/researcher
Peer with disabilities

Role

Participatory observer
Providing instruction
After the instruction, providing supervision during play

Evaluation of objectives and outcome measures

Description of outcome measure(s)

Observation by professional/researcher providing the play experience
Feedback from client/parents/professionals

Information about availability of outcome measure: publisher, website, contact person

The project is on going. Please contact: nancj10@hotmail.com, for further information regarding evaluation.

Summary of achieved effects

Achievement-
Improved face to face contact
children are beginning to initiate positive social interaction with peers
improved eye contact
children are beginning to share experiences with adults
children are beginning to develop friendships and play companions
Children are able to take turns in play with KASPAR

References to the intervention or research project

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Website

http://www.herts.ac.uk/kaspar

Keywords

Robot, play, communication, social interaction,