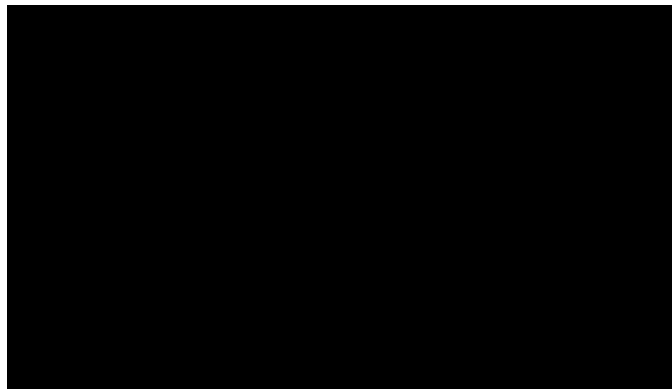


Research

ACER's extensive research expertise on educational interventions is unique. We combine decades of experience across health, social services and education, within the state, voluntary and independent sectors, working with both children and adults. This breadth of expertise has led us to recognise the diversity of the autism spectrum population and adopt an eclectic person-centred ethos. Our research and training activities involve collaboration with service users, with practitioners and carers and through partnership with key policy makers. We work interactively with institutions both inside and outside of higher education and we actively encourage prospective partners locally, nationally and internationally.

Recently funded research and development work

Alumni Impact Fund 2013-Interdisciplinary research: Robots in the classroom for children with autism.



The aim of this project was to establish a bridge between groups in the School of Education, the School of Computer Science and the School of Electrical and Electronic Engineering, thus providing the basis for a high impact collaboration between researchers within University of Birmingham. The key researchers running the study were Dr Guldberg (Education) and Dr Hawes (Computer Science), and they received support from Dr Castellano. Under their direction, interns Patricia Perez and Lila Kossovaki in Education worked closely with interns Tristan Bell and Alex Maley in Computer Science to develop a suite of intelligent behaviours for the Aldebaran Nao robot suitable for use with children with autism. These behaviours went beyond the state-of-the-art by including autonomous robot actions. The interns in Education identified the necessary behaviours whilst the interns in Computer Science implemented. They worked closely with one another, spending time to understand the problems faced by the other. The team received support from Aldebaran robotics and were able to build on work undertaken by Aldebaran for their autism solution.

SHARE-IT: School-Home Autism Research Environment through Intelligent Technologies

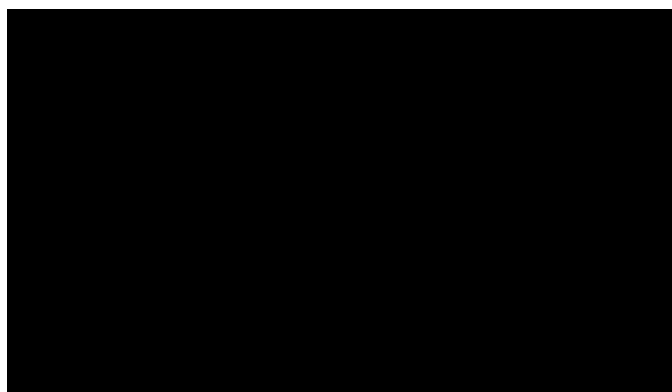
SHARE-IT is an 18 month project funded by the EPSRC. Karen Guldberg and Lila Kossovaki from ACER are working in collaboration with researchers from the Institute of Education and Birbeck College and the team are working in partnership with industry and Topcliffe Primary school.

The objective of SHARE-IT is to systematically investigate how personal and mobile devices can be used individually and together to create a scalable intelligent learning environment for children with Autism Spectrum Conditions (ASCs).

As its starting point SHARE-IT will use the hardware and software developed on the [ECHOES](http://www.birmingham.ac.uk/research/activity/education/projects/echos.aspx) (<http://www.birmingham.ac.uk/research/activity/education/projects/echos.aspx>) project, including the learning activities, the agent and the hard-coded user model, responsible for tracking the individual children's behaviours as they interact with the system. Find out more about this project on the [SHARE-IT webpage](http://www.birmingham.ac.uk/research/activity/education/acer/research/share-it.aspx) ([/research/activity/education/acer/research/share-it.aspx](http://www.birmingham.ac.uk/research/activity/education/acer/research/share-it.aspx)).

Shaping the future of educational technologies today: from prototypes to practice (SHAPE)

Technology Enhanced Learning (TEL) can offer significant benefits for children on the autism spectrum, particularly in the areas of social interaction and communication. For practitioners and parents these are priority areas for children's learning and development and yet few research-led innovations make it into real-world classrooms.



The overarching aim of this project is therefore to contribute to shaping the future landscape of technology use for children on the autism spectrum in the classroom, and through this to contribute to educational advancement, emotional wellbeing and positive outcomes for children. Through this work we will also i) explore how we can extend the use of these technologies to wider groups of children and ii) embed TEL in existing practice. This entails highlighting the benefits of well-designed TEL to both teachers and children. [Find out more on the SHAPE webpages](http://www.birmingham.ac.uk/research/activity/education/acer/research/shape/index.aspx) ([/research/activity/education/acer/research/shape/index.aspx](http://www.birmingham.ac.uk/research/activity/education/acer/research/shape/index.aspx)).

ESRC: Teaching Learning Research Partnership (TLRP)

Dr Karen Guldberg is working with a prestigious inter-university and inter-disciplinary consortium of leading emerging academics from Edinburgh, London, Sussex, Cardiff, Strathclyde, Dundee and Cardiff. This project is funded by the ESRC TLRP programme, (see link www.tlrp.org/proj/tel/lemon.html) This is a three year project. It has the dual aim of: i) creating a virtual environment in which typically developing children and children on the autism spectrum can improve social interaction and communication skills, ii) researching the link between social interaction, communication and learning.



Autism Education Trust (AET)

The Autism Education Trust (AET) was founded in November 2007 to coordinate and improve education support to all children on the autism spectrum in England. Its remit includes research, policy support and advocacy, and providing information to educators, parents and other stakeholders. Dr Glenys Jones won an award from AET to work with members of ACER and other colleagues to

map educational provision in the field of autism and to identify the challenges in ensuring good educational outcomes for children and young people. This report has made a national impact and received a glowing write-up in the Guardian (11/11/08). The full report as well as executive summaries for professionals and for parents/carers can be downloaded from the AET website:

Our latest AET report is available at: www.autismeducationtrust.org.uk/outcomes (<http://www.autismeducationtrust.org.uk/outcomes>).

National Council for Special Education (NCSE)

ACER team members worked under the direction of Associate member Dr Sarah Parsons to conduct a literature review on educational interventions for children with autism. This is an international review of the literature of evidence of best practice provision in the education of persons on the autism spectrum submitted to NCSE, the funding body.

 [International Review of the Literature of Evidence of Best Practice Provision in the Education of Persons with Autistic Spectrum Disorders \(/Documents/college-social-sciences/education/acer/ncse-report.pdf\)](#)

DCSF

In May 2008 Dr Glenys Jones secured funding from DCSF for ACER to develop two important national resources: the DCSF's national Inclusion Development Programmes in autism. Dr Glenys Jones led the development of the content for the Primary/Secondary resource and Dr Karen Guldborg led the development of the content for the Early Years resource. The IDP resources were launched nationally to all schools and early years settings in England in April 2009, and became available internationally through the web.

Other Research

Educational interventions and provision

- Department for Education (1998): Literature review of research evidence for educational interventions in ASD (1998)
- Scottish Office Education and Industry Department: Survey of educational provision for children with ASD (1996)
- Nottinghamshire County Council: Evaluation of a new secondary unit for children with ASD (2002)

Provision of good quality information for practitioners

NHS NES Scotland Web Resource created for Primary Health Care professionals, see www.nes.scot.nhs.uk/asd (2006)

Ascertaining the current situation with respect to policy and provision

Commissioned by the Council of Europe to survey the governments of member states to ascertain policy and practice in the diagnosis, education and social inclusion of children with autism spectrum disorders; collect and disseminate examples of good practice; and make recommendations.

Ascertaining the needs of individuals on the autism spectrum

Northern Ireland Commissioner for Children and Young People (NICCY) researching stakeholder views of support and services for 10 to 18-year-olds with Asperger syndrome (2007).

Information and communication technology

- Collaborative projects in Virtual and Augmentative Reality with the Institute of Robotics, the University of Valencia.
- Reactive Colours Project with Wendy Keaybright and team at University of Wales Institute Cardiff. Current research and consultancy involves evaluation and the development of a learning pack.

E-learning, Continuing Professional Development and Good Autism Practice

- Kaleidoscope European project: European network of excellence, together with Dr Rachel Pilkington from the School of Education. The Webautism programme was accepted as a Case Study for our ERT (European Research Team).
- Evaluation of student's response to e-delivery of autism spectrum training.

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