



Submission to Senate Inquiry into the Education of Children with Disabilities

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The Cooperative Research Centre for Living with Autism Spectrum Disorders (Autism CRC)

The Cooperative Research Centre for Living with Autism Spectrum Disorders (Autism CRC) is the world's first national, cooperative research effort focused on autism. Taking a whole of life approach to autism focusing on diagnosis, education and adult life, Autism CRC researchers are working with end-users to provide practical solutions for governments, service providers, education and health professionals, families and people with autism. Autism CRC aims to solve complex problems with innovative solutions that can only come from having the best minds collaborating as one team.

www.autismcrc.com.au

Some Key Facts about Autism CRC

- Autism CRC researchers focus on the lived experience of those on the spectrum and improving their lives in a practical way.
- Our research philosophy is founded on participation of the autism community in the definition of research needs, as well as the conduct and evaluation of research.
- Autism CRC is committed to development of and translation to use of evidence-based outcomes, interventions and tools.
- Our unique national partnership of research providers and end-user organisations enables the effective translation of research and the delivery of new products and services to the autism community.
- Autism CRC researchers research autism across the lifespan.
- Enabled by Autism CRC's participants and the Commonwealth Government's Cooperative Research Centre program, Autism CRC is the only national collaborative research centre focusing on autism research and its translation, having the critical mass to significantly and positively deliver social, economic and health dividends.

Our Goals

To provide practical solutions for governments, service providers, education and health professionals and families of people with autism to improve life outcomes.

To be recognised as the leading research collaboration/consortia in Australia (and the world) for improving the lives of people with autism.

To attract the brightest and best students, researchers, product developers and industry experts to find advanced solutions that benefit the end-user.

Autism Spectrum Disorder (ASD), is amongst the most severe, prevalent and heritable of all neurodevelopmental disorders affecting at least 1 in 100 Australian children.

Autism is a lifelong condition with an estimated annual economic cost to Australia potentially exceeding \$7 billion.

There has been a 25-fold increase in the number of diagnoses in the past 30 years and there are now more children with autism than the combined number of children with cerebral palsy, diabetes, deafness, blindness and leukaemia.

Our Key Research Programs

Program 1 – Diagnosis

Program 1 aims to harness existing knowledge of autism to ensure early and accurate diagnosis, and use breakthroughs in biological research to identify subtypes of autism and the most effective interventions for these.

Program 2 – Education

Program 2 aims to provide autism appropriate educational environments and programs that optimise students' social, behavioural and academic success, and equip teachers to manage even the most complex behaviours.

Program 3 – Adulthood

Program 3 aims to improve opportunities for people with autism to successfully transition to post school life, participate in higher education and employment, and identify best practice in health management.

Senate Inquiry on Education of Students with Disabilities in the School System

On 17 June 2015, the Senate referred the inquiry into current levels of access and attainment for students with disability in the school system, and the impact on students and families associated with inadequate levels of support to the Education and Employment References Committee for inquiry and report.

The following matters were referred to the Education and Employment References Committee for inquiry and report by 3 November 2015 (emphasis added by Autism CRC):

- a. current levels of access and attainment for students with disability in the school system, and the impact on students and families associated with inadequate levels of support;**
- b. the social, economic and personal benefits of improving outcomes for students with disability at school and in further education and employment;**
- c. the impact on policies and the education practice of individual education sectors as a result of the More Support for Students with Disabilities program, and the impact of the cessation of this program in 2014 on schools and students;
- d. the future impact on students with disability as a result of the Government's decision to index funding for schools at the consumer price index after 2017;
- e. the progress of the implementation of the needs-based funding system as stated in the Australian Education Act;
- f. the progress of the Nationally Consistent Collection of Data on School Students with Disability and the findings, recommendations and outcomes from this process, and how this data will, or should, be used to develop a needs-based funding system for students with disability;
- g. how possible changes as a result of the Nationally Consistent Collection of Data on School Students with Disability will be informed by evidence-based best practice of inclusion of students with disability;
- h. what should be done to better support students with disability in our schools;**
- i. the early education of children with disability;** and
- j. any other related matters.

http://www.aph.gov.au/Parliamentary_Business/Committees/Senate/Education_and_Employment/students_with_disability/Terms_of_Reference

The Autism CRC submission addresses inquiry matters a, b, h, and i..

Autism CRC would be pleased to provide further information to the Inquiry, either in writing or by appearing in person before the Inquiry. Should the Inquiry seek further information, please contact:

- a. Mr Andrew Davis

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Email: ()

Tel: **Current levels of access and attainment for students**

with disability in the school system, and the impact on students and families associated with inadequate levels of support;

(a.1) Introduction

Students with a diagnosis of autism present unique challenges to school systems. It is important for teachers and allied health professionals to focus on the strengths that children have as well as acknowledging where the child needs support in their academic and social learning. An inclusive approach to education requires teachers to address these challenges and to support the unique needs of students with autism (Batten, 2005, Lynch & Irvine, 2009). Challenging and complex behaviours are more frequent in children with autism and without appropriate intervention these behaviours tend to persist across an individual's lifespan (Murphy et al., 2005).

(a.2) Access to education

The Australian Bureau of Statistics (ABS) (2014) reported that in 2012, 5% of children with autism attended school and did not experience any educational restrictions. Of the 95% of children who did experience some restrictions, 6% of children were not able to attend school because of their disability and 44% needed to attend either a special class in a mainstream school, or a special school. For children with autism who were attending school, 86% reported 'having difficulty' at school. These difficulties reflect the characteristics of autism which make schooling so challenging. The difficulties are with fitting in socially, learning and communication.

(a.3) Attainment

Children with autism often require a high level of support to attend school, with 36% needing a counsellor or disability support person and 39% requiring special tuition (ABS, 2014). Of people with autism who had finished school, 81% had not completed a post-school qualification.

(a.4) The impact on students and families associated with inadequate levels of support.

Students on the autism spectrum and their families require support to complete school successfully. In many situations, poorly equipped teachers are attempting to include students with autism into the mainstream with limited knowledge of autism and little knowledge of how to manage a range of behaviours associated with Autism. The consequences are a disrupted learning environment for other students, interrupted schooling for the student with autism through reduced attendance and retention, lower academic performance, exclusion, disengagement, and pressure on parents to make alternative arrangements for their child's education.

Recently The Cooperative Research Centre for Living with Autism Spectrum Disorders (Autism CRC) (www.autismcrc.com.au) conducted The Australian ASD Educational Needs Analysis (ASD-ENA). This project aimed to produce the first Australian wide needs analysis of students with autism (aged 5-16 years) and their educational needs. The needs analysis collected information from some key stakeholder groups:

1. school administrators
2. teachers and specialist support staff
3. ancillary support staff such as teacher aides
4. parents of students with autism
5. students with autism

1468 respondents participated in the survey. Survey participants came from every state of Australia and included:

- 248 educators,
- 179 specialists,
- 107 students with autism,
- 934 parents.

When asked to identify the needs of students with autism that had the most impact and needed the highest level of support in schools, the following preliminary results were collected from educators, specialists and parents and show strong agreement

across all stakeholder groups in relation to the top 4 needs of students with autism within educational contexts. See Table 1.

Table 1. Needs of Students with Autism that have Most Impact and Highest Level of Support in Schools

Top 4	Educators	Specialists	Parents
1	social emotional needs	social emotional needs	social emotional needs
2	behavioural needs	behavioural needs	behavioural needs
3	communication needs	communication needs	communication needs
4	sensory needs	sensory needs	sensory needs

In addition, when asked to rate the factors which had the most effect on students with autism and their capacity to participate at school the following 6 factors were rated as the top 6 influencing factors. See Table 2.

Table 2. Top 6 Factors influencing Students with Autism's Capacity to Participate in Schools

Top 6	Educators	Specialists	Parents
1	Difficulty organising their thoughts	Anxiety	Attention to task and difficulty organising their thoughts
2	Anxiety	Difficulty understanding what to do	Anxiety and difficulty organising themselves and their belongings
3	Difficulty understanding what to do	Difficulty organising their thoughts	Difficulty organising themselves and their belongings

4	Difficulty organising themselves and their belongings	Attention to task	Resistance to change and rigidity
5	Attention to task	Difficulty organising themselves and their belongings	Unable to ask for help
6	Resistance to change and rigidity	Resistance to change and rigidity	Failure to complete tasks

The top 4 barriers identified by educators, specialists and parents to supporting students with autism with complex and challenging needs are outlined in Table 3.

Table 3. Top 4 barriers Identified to Supporting Students with Autism in Schools

Top 4	Educators	Specialists	Parents
1	Inadequate funding to support the student's needs	Inadequate funding to support the student's needs	Inadequate funding to support the student's needs
2	Lack of suitable education and training for staff	Lack of time	Lack of suitable education and training for staff
3	Lack of specialist support available from external organisations and specialists	Lack of suitable education and training for staff	Lack of time
4	Lack of time	Lack of specialist support available from external organisations and specialists	Lack of specialist support available from external organisations and specialists

According to the students with autism the following tasks were rated as difficult to cope with in school settings. See Table 4.

Table 4: Tasks Rated as Most Difficult for Students with autism.

Top 10	Top 10 Tasks Rated as Most Difficult to Cope with by Students with Autism
1	Planning for assignments
2	Working as part of a group
3	Handwriting – being neat
4	Coping with change (e.g., changes in teachers, or the timetable)
5	Coping with bullying/ or teasing
6	Handwriting - being quick enough to keep up
7	Copying information from the board
8	Doing homework
9	Staying calm when other kids annoy me
10	Staying clam when the classroom is very noisy

The students with autism rated a range of support options to help them at school. Some of the **top rating supports** included being able to use technology, help to organise themselves, using special interests for project work, 1-1 support from adults, being rewarded for jobs well done, getting a copy of things, taking a break and time away and reminders of pending change. This information will be useful in helping to look at support options in other research projects being undertaken by Autism CRC researchers.

b. The social, economic and personal benefits of improving outcomes for students with disability at school and in further education

Improving the capacity to successfully educate students with autism in an appropriate environment so that they achieve their academic and social potential will offer significant cost savings to state and non-government education providers, further increase the productivity of parents of children with autism, and provide a firm basis for post-school achievements and reduced adult dependency.

The capacity of Australian schools to deliver a quality education to students with autism will be enhanced by better training and professional development for teachers and other school staff. This will lead to a more inclusive and accepting school community where diversity is recognised and actively embraced. Teachers will have enhanced coping mechanisms and will feel more satisfied and confident that they can manage and relate to the needs of students with autism with access to more appropriate resources, training and tools. They will feel more empowered to make a difference in children's lives as better facilitators of children's learning. The educational approaches utilised to enhance the learning of students with autism will also have a broader application and will be able to be successfully applied and utilised with all learners in classrooms using universal design for learning principles.

h. What should be done to better support students with disability in our schools

With the social and economic cost of autism in our school systems, there is an urgent need to identify appropriate educational environments and programs for students with autism so that they have the best chance of social, behavioural and academic success at school. In response to the complex nature of the needs of students with an autism, projects being undertaken within the Autism CRC Program 2 ("Enhancing Teaching and Learning") combine to address a number of these needs, through a number of different research themes. Whilst these research themes have been developed and driven by the needs articulated by individuals who have autism and their families, it is anticipated the findings will also inform how

learning and teaching can be enhanced within all Australian schools to better meet the needs of all learners in inclusive school settings.

Classroom Instructional and Environmental Strategies

The first of these three themes relate to the strategies used within the classroom, directly with - or by - the student, in order that the student can complete learning tasks to the best of his or her ability. The first project (*Project 2.011, Helping students to stay on task, and move between tasks*) aims to address the difficulties which some children with autism experience with staying on task. These difficulties arise from a student's attention which may be narrowly focused and which may not be directed to relevant parts of the learning activity. Differences in the capacity of students on the autism spectrum to plan and organise his or her work means that approaches to learning activities may be ad hoc and the tasks themselves difficult to complete efficiently. Many students on the autism spectrum lack flexibility and, as such, struggle to move from one task to another – this can be exacerbated if initiated by the teacher or if the transition is unexpected. Reactions to such transitions include behavioural 'meltdowns' and these are highly distressing for the child themselves, the teacher and other students. Structured teaching is an approach which has been demonstrated to be extremely successful in assisting students with autism to both engage with learning tasks and transition between tasks. However, such approaches have largely been confined to special education contexts. Project 2.011 will extend upon this critical work investigating how structured teaching can be used successfully within mainstream classrooms to support student engagement with tasks planned by the teacher. This will include, but will not necessarily be restricted to, applications of appropriate strategies via assistive technologies.

One aspect of classroom performance which is critical but particularly difficult for many children with an autism revolves around their ability to complete *written* work. Project 2.010 *Overcoming Written Difficulties* is tasked with investigating ways in which students with autism can be supported to overcome their difficulties with producing written work in the classroom. Typically, once children have learnt to write, their ability to do so becomes an essential vehicle through which they express their knowledge and future learning. However, children on the autism spectrum struggle with producing written work and this will then impact on their learning, particularly

once they have moved beyond the early years of school. Challenging behaviours in the classroom are often triggered by the frustration associated with writing. The reasons for these difficulties with written expression are twofold. The first reason involves the physical act of writing and the second relates to the conceptual aspects (knowing what to write and having the language abilities to do so). The first challenge can be circumvented through the use of computer-based technologies whilst an explicit writing strategy instruction known as Self-regulated Strategy Development (SRSD) has been found to improve the written expression of students with autism. Project 2.010 will investigate how the combined use of assistive technology and SRSD can facilitate completion of written tasks for students with autism.

The third project included within this theme, *Project 2.028 Improving Classroom Acoustics*, aims to investigate how sound field amplification (SFA) systems may improve the behaviour and learning of students with autism within the mainstream classroom. Students with autism have consistently been found to have significant deficits in processing speech in a noisy background, which comprises their capacity to follow their teacher's instructions in noisy classrooms. Furthermore, as they process sensory input differently, students with autism often find the noise of classrooms overwhelming. Studies carried out in special education classrooms indicate that improved acoustics can significantly improve attention and reduce response times in children with autism (Kinnealey et al., 2012). To date, SFA has not been trialled in mainstream classrooms. As such, this project will investigate how the SFA impacts upon the learning, behaviour and classroom performance of student's with autism.

The fourth project that will provide outcomes of interest to the Inquiry is *Transition Models of Practice (MoP)* that addresses the need for student's with autism to be supported with transitions in primary and secondary schools. In spite of more general transition programs, quality indicator checklists, and online resources to support the transition of students with disabilities within and across educational settings, the effective use of strategies to support the inclusion of new students with autism is patchy (Lilley, 2014). Transition models of practice (MoP) are urgently needed to bridge the current research-to-practice gap (see Cook, Cook, & Landrum, 2013).

This project aims to produce effective and sustainable MoP and related multimedia resource packages that will allow educators in Australian primary and secondary schools to make informed choices about ways to address the transition needs of their students with autism within the overarching framework of the Australian Curriculum. Schools from New South Wales, Victoria and Queensland will participate in the Transition project.

Social Emotional Needs of Students on the Spectrum in Classrooms and Schools

Projects included in the second theme of the Autism CRC Program 2 also aim to address concerns regarding the way in which the social-emotional needs of students with an autism as well as their engagement with schools can be safeguarded. Within this theme, some projects will also respond to concerns regarding service delivery of support to schools in rural and remote areas of Australia.

The first project, *Project 2.008 Secret Agency Society – Whole of Class* is investigating the application of the small group program, Secret Agent Society, to a whole of class delivery to children in Year 5. While this program has been specifically developed for children with poor social-emotional skills (i.e., those with high functioning autism) it has demonstrated good effects with typically developing children who experience some peer difficulties (Pearson, Beaumont & Sofronoff, in prep). In small group delivery of the SAS program, children with autism have demonstrated development in a number of emotional-social abilities. Thus, application to a whole of class approach reinforces the tenet of inclusive schooling and potentially meets the social- emotional needs of children, on and off the autism spectrum. This project will be delivered in metropolitan regions in Queensland, Victoria and New South Wales.

Project 2.027 Early Years Behaviour Support Program (EYBSP) has two aims. The first of these aims is to investigate the process of inclusion of children with autism and high impact needs in mainstream classrooms. Personalised support structures for each child, teacher and family will be devised to support both child and teacher in this process. Furthermore, as children with autism and teachers who live in rural and remote areas of Australia often have limited access to services and support, the

support provided to the teacher will be delivered using a teleconsultation approach. Whilst often in use within the medical context, limited data on the use of teleconsultation within educational settings is available. Teams of professional including specialist educators and allied health professionals will provide the support from Autism-specific organisations in Queensland and New South Wales to address the needs of children in these states as well as Victoria.

Project 2.029 School Connectedness will investigate how to maximise School Connectedness for students with autism in Years 7 and 8. School connectedness has been defined by Goodenow (1993) as “the extent to which students feel personally accepted, respected, included, and supported by others in the school social environment” (p. 80). School connectedness has been viewed as a protective factor and is correlated with important school outcomes (McNeely, Nonnemaker, & Blum, 2002) including adolescent academic and emotional well-being (Shochet, Dadds, Ham and Montague, 2006). It has been found to correlate strongly and positively with students’ academic motivation and with indices of school performance and adjustment (Anderman & Freeman, 2004; Furlong et al., 2003; Goodenow, 1993; Hagborg, 1994; Haynes, Emmons, & Ben-Avie, 1997). This project will operate on several levels in order to optimise school connectedness for students with an autism and their families. At an individual participant level, students will participate in small group and individualised sessions using the Resilient Adolescent Program (RAP), which has been tailored for use with student with autism. Simultaneously, parents will participate in RAP sessions for parents. Training in the applications of RAP principles to the whole school environment will also be provided to teachers at the school. Simultaneously, the Index of Inclusion will be introduced to the whole school community in order to promote an inclusive approach in the school. It is hypothesised that all students, including those with autism, who have higher levels of school connectedness will remain at school longer and ultimately experience more success than their counterparts who have low levels of school connectedness.

i. The early education of children with disability

The final theme of the Enhancing Teaching and Learning of Students on the Spectrum within the Autism CRC will investigate the long term outcomes of Australian students with autism as

1) a function of the characteristics of each child (e.g. presence of attention deficits or language impairment, significant levels of highly repetitive behaviours); and

2) their early- and mid-year school experiences, in addition to specific interventions undertaken.

This survey will require parents from across Australia to complete annual surveys and questionnaires which include published, standardised tools. School principals and class teachers will be approached annually in order that they can also complete (shorter) questionnaires.

References

Anderman, L. H., & Freeman, T. M. (2004). Students' sense of belonging in school. In P. R. Pintrich & M. L. Maehr (Eds.), *Advances in motivation and achievement* (Vol. 13, pp. 27–63). Oxford, England: Elsevier.

Australian Bureau of Statistics (2014). 4428.0 - Autism in Australia, 2012 (Latest ISSUE Released at 11:30 AM (CANBERRA TIME) 04/06/2014)
<http://www.abs.gov.au/ausstats/abs@.nsf/Latestproducts/4428.0Main%20Features52012?opendocument&tabname=Summary&prodno=4428.0&issue=2012&num=&view>

Batten, A. (2005). Inclusion and the autism spectrum. *Improving Schools*, 8(1), 93-95. doi: 10.1177/1365480205049341

Cook, B. G., Cook, L., & Landrum, T. J. (2013). Moving research into practice: Can we make dissemination stick? *Exceptional Children*, 79(2), 163-180.

Furlong, M. J., Whipple, A. D., St. Jean, G., Simental, J., Soliz, A., & Punthuna, S. (2003). Multiple contexts of school engagement: Moving towards a unifying framework for educational research and practice. *The Californian School Psychologist*, 8, 99–113.

Goodenow, C. (1993). The psychological sense of school membership among adolescents: Scale development and educational correlates. *Psychology in the Schools*, 30(1), 79-90.

Hagborg, W. J. (1994). An exploration of school membership among middle- and high-school adolescents. *Journal of Psychoeducational Assessment*, 12, 312–323.

Haynes, N. M., Emmons, C., & Ben-Avie, M. (1997). School climate as a factor in student adjustment and achievement. *Journal of Educational and Psychological Consultation*, 8, 321–329.

Hume, K., Plavnick, J. & Odom, S. (2012) Promoting task accuracy and independence in students with autism across educational setting through the use of individual work systems. *Journal of Autism and Developmental Disorders*, 42 (10), pp. 2084–2099.

Lynch, S.L., & Irvine, A.N. (2009). Inclusive Education and best practice for children with Autism Spectrum Disorder: An integrated approach. *International Journal of Inclusive Education* 13 (8), 1-15. doi: 10.1080/13603110802475518

McNeely, C. A., Nonnemaker, J. M., & Blum, R. W. (2002). Promoting school connectedness: Evidence from the national longitudinal study of adolescent health. *Journal of School Health*, 72(4), 138-146.

Murphy, G.H. Beadle-Brown, J., Wing, L., Gould, J., Shah, A. and Holmes, N. (2005) Chronicity of Challenging Behaviours in People with Severe Intellectual Disabilities and/or Autism: A Total Population Sample. *Autism*. 35 (4) 405-418.

Kinnealey, M., Pfeiffer, B., Miller, J., Roan, C., Shoener, R., & Ellner, M. L. (2012). Effect of classroom modification on attention and engagement of students with autism or dyspraxia. *American Journal of Occupational Therapy*, 66, 511–519.

Lilley, R. (2014). Professional guidance: Maternal negotiation of primary school placement for children diagnosed with autism. *Discourse Studies in the Cultural Politics of Education*, 35(4), 513-526.

Mesibov, G. B., & Shea, V. (2010). The TEACCH Program in the era of evidence-based practice. *Journal of Autism and Developmental Disorders*, 40, 570–579

Mostafa, M. (2008). An architecture for autism: Concepts of design intervention for the autistic user. *International Journal of Architectural Research*, 2, 189–211.

Parsons, S., Charman, T., Faulkner, R., Ragan, J., Wallace, S., & Wittemeyer, K. (2013). Commentary – bridging the research and practice gap in autism: The importance of creating research partnerships with schools. *Autism*, 17(3), 268-280.

Rance, G., Saunders, K., Carew, P., Johansson, M., & Tan, J. (2014). The use of listening devices to ameliorate auditory deficit in children with autism. *The Journal of Pediatrics*, 164(2), 352-357.

Shochet, I. M., Ham, D., Dadds, M. R., & Montague, R. (2006). School connectedness is an underemphasized parameter in adolescent mental health: Results of a community prediction study. *Journal of Clinical Child & Adolescent Psychology*, 35(2), 170-179.