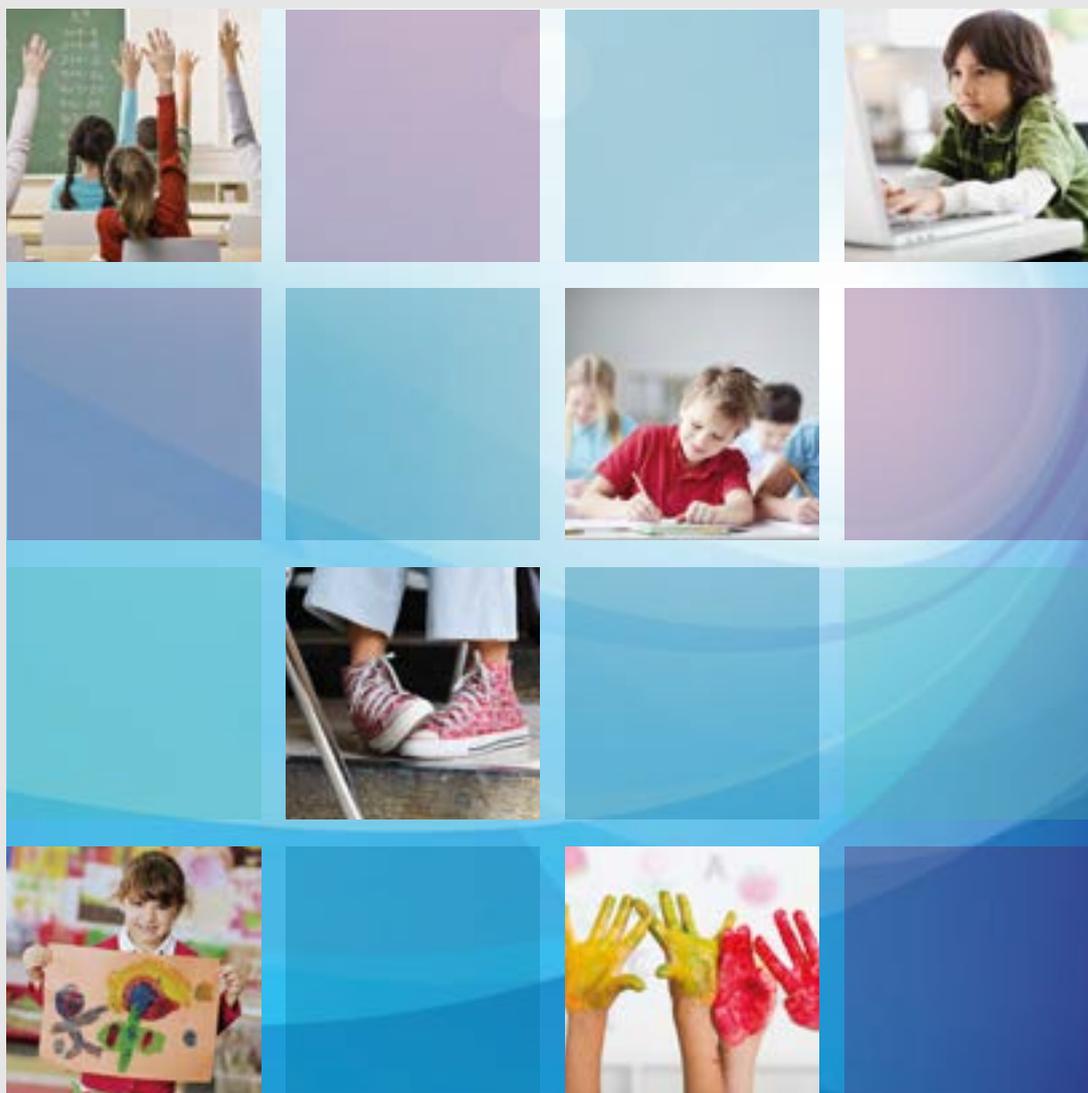


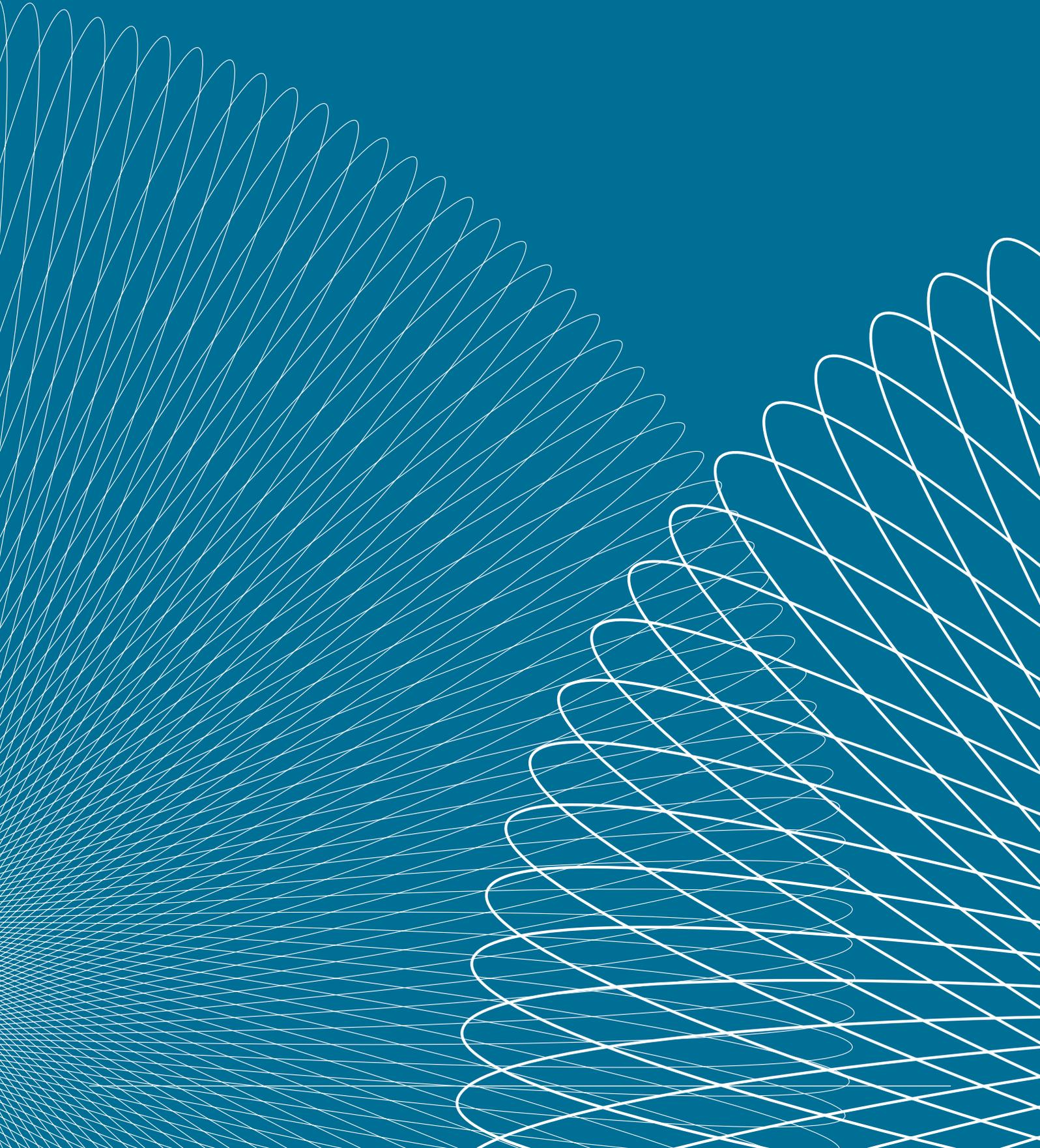


## Enabling Education



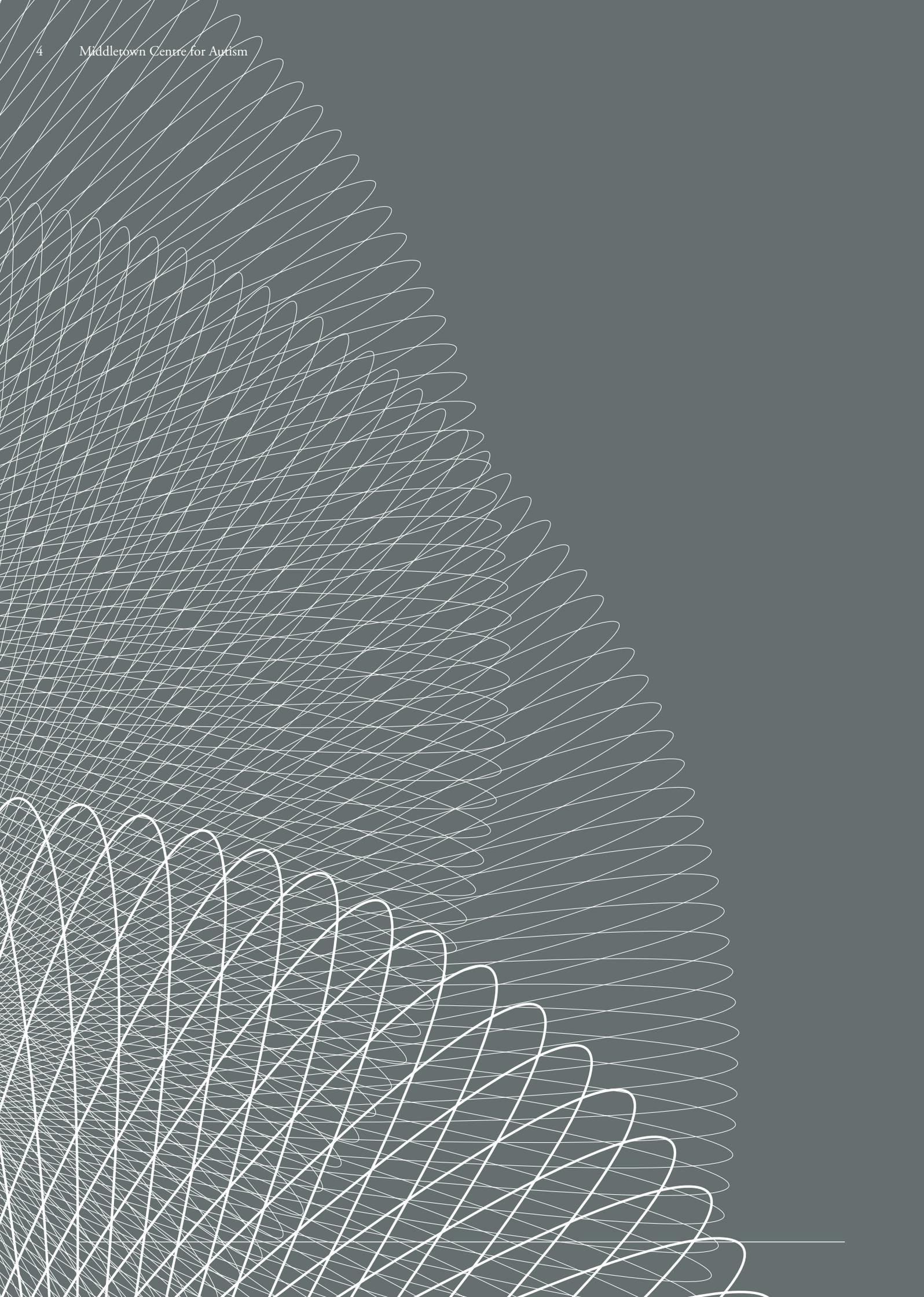
Research Bulletin Issue No. 15

Enhancing the lives of children and young people with autism and their families,  
through the delivery of specialist educational services



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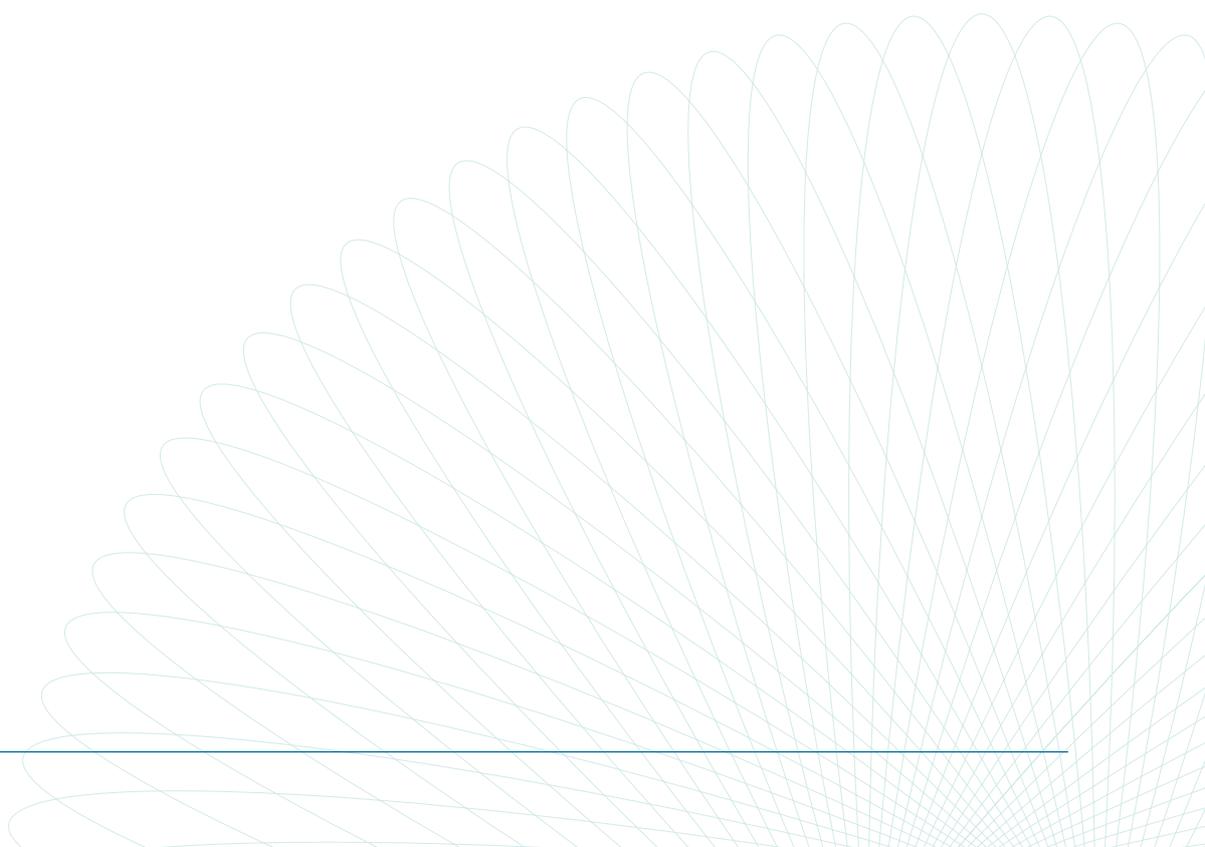


## INTRODUCTION

This is the fifteenth Research Bulletin produced by Middletown Centre for Autism. The aim of the Centre's Research Bulletins is to provide accessible summaries of relevant peer-reviewed research articles and reviews of literature. The current Research Bulletin was developed for the Centre's first International Conference to be held on 9-10 January 2015. The Bulletin contains thirteen articles related to Enabling Education in supporting children with autism. Articles have been sourced from a range of peer-reviewed journals from the period 2009 to 2014. The Bulletin commences with an interview with Professor Tony Attwood.

*Please note that the views represented in this document do not necessarily reflect the views of Middletown Centre for Autism. Reviewers have, where possible, used the original language of the article, which may differ from UK and Ireland usage and the usage of a range of terminologies for autism.*

**Professor Tony Attwood** is a clinical psychologist who has specialised in autism spectrum disorders since he qualified in 1975. He is known worldwide for his knowledge of Asperger's Syndrome. He works in private practice in Brisbane, but is also adjunct professor at Griffith University, Queensland. His book *Asperger's Syndrome – A Guide for Parents and Professionals* has sold over 300,000 copies and has been translated into twenty languages. He has worked with over 3,000 individuals of all ages with Asperger's Syndrome. Tony presents workshops and runs training courses for parents, professionals and individuals with Asperger's Syndrome all over the world and is a prolific author of scientific papers and books on the subject. His book *The Complete Guide to Asperger's Syndrome* was published in October 2006.





## AN INTERVIEW WITH PROFESSOR TONY ATTWOOD

### 1. What does “Enabling Education” mean to you?

My interpretation of enabling education is educating the educators, particularly in the area of understanding autism and the concept of mutual education, that is, learning from each other. The teacher or therapist will need to be educated by the child in terms of the unique profile of abilities, personality and circumstances.

### 2. Why did you choose a Cognitive Behavioural Therapy approach as a method to teach children with autism about recognising and managing emotions?

I chose Cognitive Behaviour Therapy (CBT) because the therapy is a very logical and scientific way of understanding and managing emotions and CBT seems to suit the logical, scientific mind of many of those who have an Autism Spectrum Disorder. It is also a therapy that has been clearly established as effective with typical children and adolescents. However, there needs to be changes made to CBT, based on the distinct abilities associated with autism.

### 3. In your opinion, how can teachers help children and young people with autism to reach their potential?

To help a child with autism reach their potential, it is important to look at the needs of adults who have autism and in my clinical experience, the greatest needs for adults are in terms of daily living skills, managing anxiety and employment skills. Thus, it is very important that the school curriculum prepares the child for these adult needs. Thus we must re-design some aspects of the school curriculum.

### 4. What are the three most important aspects that teachers should bear in mind when working with children with autism?

- i. Children with autism have a different way of perceiving the world in terms of sensory perception but also different in terms of thinking and learning.
- ii. Teaching is conducted today primarily in a social, conversational context, yet social and linguistic abilities are often very significantly impaired with an Autism Spectrum Disorder. Thus, conventional teaching strategies that work so well with typical children may not be the most effective education strategies for those with an Autism Spectrum Disorder. They often have greater progress when using a computer or iPad, as there are no social and linguistic abilities required with an iPad.
- iii. It is very important that teachers create an autism-friendly environment, not only in terms of learning and sensory experiences but also in terms of attitude. I have found that those with autism can actually be incredibly sensitive to the attitude of the teacher.

### 5. Please recommend some simple measures that schools can take that can help with the school experience of children and young people with autism.

I think that schools could help the child with autism cope with the school day by encouraging opportunities to experience safe solitude, away from the constant demands to process social information. These islands of solitude and tranquillity can help the child cope both emotionally and cognitively with the school day. It is also important that the teacher has a very stable emotional equilibrium and especially, that they remain calm when the

child becomes increasingly frustrated or agitated. I also recommend that the peer group needs to understand why the child is different, not necessarily using the “a” word, but understanding the world as perceived by the child with autism and how they can help that child, not only in terms of learning the curriculum but also to be engaged in social activities.

### **6. Please provide some short tips for families on managing family life.**

I think that first and foremost, parents need to look after themselves in terms of having the energy to provide the support that the child will need, as well as being consistent and assertive in managing the child at home. Having a child with autism can be emotionally quite draining and so the parents will need to have their own ways of restoring energy and inner strength. It is also important that both parents provide consistent management strategies as I do find for children with autism, there can be quite considerable differences in the way that the mother or father approaches aspects such as management and discipline. It is also important that the family becomes an expert on ASD, not just on their child but also their personality and range of strategies they may need and to have quality time together that is not involved with therapy programs, but sheer delight in each other's personalities with unconditional love and affection from the parents.

### **7. What are your views on the DSM-5 classification of Autism?**

I think there are some positive and negative aspects of the new DSM-5. The positives are the term, Autism Spectrum Disorder and the inclusion of sensory sensitivity which legitimises this problem and the concept of having different levels of autism and the child progressing through those levels over time. The descriptions of deficits in social communication and social interaction are accurate in terms of clinical experience and I agree with the dimension approach.

With regard to the negatives, I am concerned that there is a movement towards collapsing the dimensions of autism to two, namely, deficits in social communication and social interaction and restricted, repetitive patterns of behaviour, interests, or activities. I view Autism Spectrum Disorder as actually having six dimensions, namely, social, emotional, cognitive, linguistic, sensory and motor. I also think that it is unwise to remove the term, Asperger's Syndrome, as this term has had considerable benefit, not only to those who identify with this label but also in terms of the public's perception of Asperger's Syndrome. In my clinical reports, I will now modify DSM-5 to say that the child has an Autism Spectrum Disorder, Level 1 (Asperger's Syndrome), so that parents and others will know where to go for information as at present, there are no books with a title that includes Autism Spectrum Disorder, Level 1.

The diagnostic criteria are much stricter in DSM-5 and there may well now be a reduction in the number of children who achieve a diagnosis. There is currently a movement to relax some of the criteria to be consistent with the previous DSM. I am also concerned that the new term, Social (pragmatic) Communication Disorder, has many characteristics associated with ASD but it is viewed as a separate and distinct condition from autism with very little clinical training or research in defining the nature of Social (pragmatic) Communication Disorder. I wonder if the new International Classification of Diseases, which is a World Health Organisation publication may be able to rectify some of the problems of DSM-5.

**8. Parents and teachers are concerned about children and young people understanding their diagnosis, even telling them that they have a diagnosis of autism or Asperger's Syndrome. How do you recommend that this is done? What is the ideal age? Is telling the child or young person necessary? What about telling their peers? Can this act as an inclusionary or exclusionary strategy?**

I do think it is very important that those who have the characteristics of an Autism Spectrum Disorder have an opportunity to have their differences explained in a constructive way. The child themselves will recognise that they are different to others, usually between the ages of six and eight years and the ideal time to tell the child of their

diagnosis is when they start to notice that they are different. The process involves identifying the positive attributes associated with ASD as well as the areas where they may need help and guidance, for example, making friends and managing emotions. I find that teenagers are often reluctant to accept or embrace the diagnosis; more because of the fear of isolation from their peers should a disability be formally recognised. There is a risk of derogatory comments and ridicule associated with the term.

In the Primary school years, I do think it is important that the peers have an explanation of why the child is different, perhaps not using diagnostic labels but why the child behaves differently in the playground and classroom and has a different learning style. The program to explain the child to the peer group should also include strategies that other children can use to help the child socially and also with regard to integration in the classroom.

**9. What do you feel are research priorities within autism?**

I think that the new areas for research are early diagnosis, that is, potential diagnosis in a child of less than one year, the sensory profile of those with an Autism Spectrum Disorder and to establish exactly what is occurring neurologically but also strategies that can be developed to alleviate the great stress associated with sensory sensitivity and finally, the aging process in the last decade of life with an Autism Spectrum Disorder.



# EARLY INTERVENTION FOR CHILDREN WITH AUTISM SPECTRUM DISORDERS: “GUIDELINES FOR GOOD PRACTICE” 2012

## RESEARCH AIMS

The purpose of this review study was to identify the most effective models of practice in early intervention on the continent of Australia, with a view to the provision of concrete research and evidence based guidelines for best practice in the area of early intervention and Autism Spectrum Disorder.

## RESEARCH METHODS

The research included a full review of developmental/behavioural learning-based interventions for children aged seven and under, across the various states of Australia. Medical/complementary and alternative based interventions were not addressed in the research review.

Those included were:

- Behavioural interventions.
- Developmental interventions.
- Therapy based interventions.
- Combined interventions.
- Family based interventions.
- Other interventions.

Based on the evaluations of each comprehensive programme, the Researchers then created the guidelines for good practice in the “Helping Children with Autism” (HCWA) Early Intervention package. This provided an eligibility rating for reviewed interventions for funding under the HCWA package in Australia.

The standardised key for this evaluation table is:

1. ER – Eligibility based on established research evidence.
2. EE – Eligibility based on emerging research evidence.
3. EO – Eligibility only where used in partnership with other eligible therapy/ies.
4. NE – Not eligible – insufficient or no established, emerging or best practice evidence.

Further information in relation to this “ranking system”, can be found on the link below.

[www.fahcsia.gov.au/autism](http://www.fahcsia.gov.au/autism)

## RESEARCH FINDINGS

Research evidence from the study suggests that those highly intense interventions which include family/health and educational input, and addressing the child’s and family’s needs, using a range of behaviours, educational and / or developmental approaches, have proven to be the most effective. Also evidenced is the positive outcome from intensive Applied Behaviour Analysis (ABA) programmes as well as developmental and combined programmes.

Key elements deemed necessary for effective interventions include:

- Autism specific curriculum - with focus on attention, compliance, imitation, language and social skills.
- Highly supportive teaching environments, which deal with the need for predictability and routine.
- The support of all children in their transitions from preschool.
- Family support via partnerships with all involved professionals.

The report also outlined “Good Practice Guidelines” based on this review of interventions. The paper states: “there are a number of basic, good practice principles fundamental to working with all young children with special needs and their families” (Prior & Roberts, 2012).

These guidelines include:

- Assessment for intervention and planning.
- Individualised programme based on strengths and needs.
- Review, evaluation and adjustment of the programme.
- Highly supportive teaching environments.
- Predictability and routine.
- A functional approach to challenging behaviour.
- Transit support.
- Family involvement.
- Use of visual supports.
- Multi-disciplinary collaborative approach.

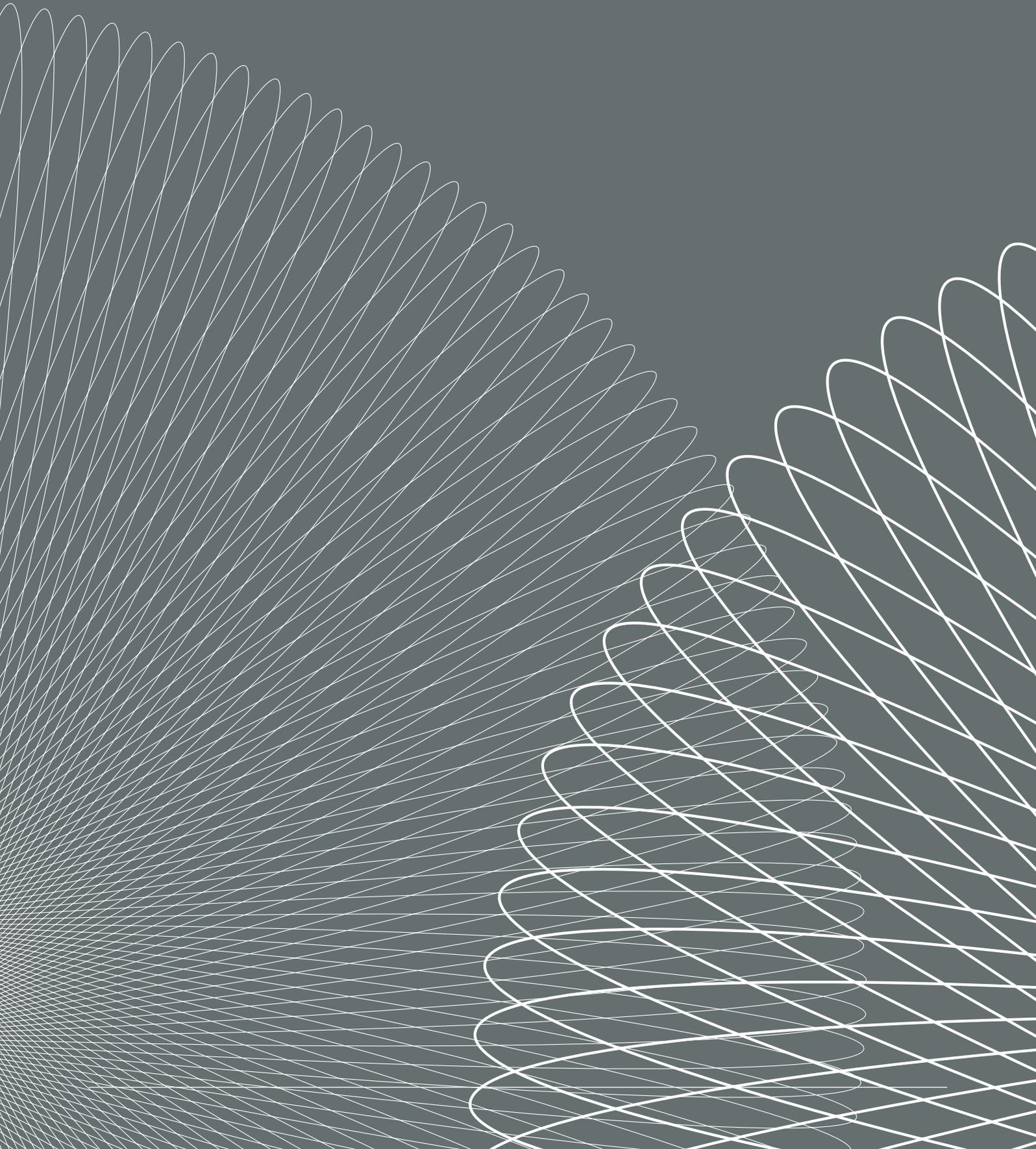
## RESEARCH IMPLICATIONS

The review found that:

- Only a small number of the treatment programmes have direct evidence supporting effectiveness.
- Evidence from high quality intervention trials is at times inconsistent.
- Limited documented information about potential adverse treatment outcomes and cost benefits.
- Many families are reported to be choosing a range of alternative therapies with little or no scientific evidence for success with autism.

### Full Reference

Prior, M. and Roberts, J. (2012). Early Intervention for Children with Autism Spectrum Disorders: “Guidelines for Good Practice”, [On-line]: UK Available [http://www.autismrpaphub.org/sites/default/files/resources/early\\_intervention\\_practice\\_guidelines.pdf](http://www.autismrpaphub.org/sites/default/files/resources/early_intervention_practice_guidelines.pdf).



# VIDEO SELF-MODELING TO IMPROVE ACADEMIC PERFORMANCE: A LITERATURE REVIEW

## CONTEXT

When using Video Self-Modeling (VSM), videotaped segments of a student's performance are edited to present the student performing the desired skill without error. The edited video is then shown to the student. In the school setting, VSM has been used across a variety of skills and with a range of ages and types of students.

## RESEARCH AIM

The purpose of this review is to locate and analyse published studies that used Video Self-Modeling (VSM) for typical school-based academic skills to determine the effect of VSM interventions on students' academic performance.

## RESEARCH METHOD

Articles were selected for review if they met the following criteria:

- a. The research report was published.
- b. The publication described a research study and was not a theoretical or opinion piece.
- c. The independent variable was VSM.
- d. The dependent variable was an academic skill, such as reading, writing, or math, or a skill that directly influenced academic performance, such as engaging in academic activities and staying on task.

Eight published articles met the selection criteria. The eight studies reviewed involved 181 students. Participants were aged six to 17 years and were identified as having disabilities and at risk for academic difficulty.

## RESEARCH FINDINGS

Generally, results indicated that VSM increased student performance across the behaviours studied. In most cases, improved performance was maintained through a follow-up phase of experiments, with the exception of writing skills.

### *Reading*

Reading skills were targeted for improvement in four studies, with researchers aiming to improve students' oral reading fluency, comprehension, and textual response. Results indicated that students made gains in oral reading fluency and continued to improve in fluency following the intervention phases of the experiments. When the effects of VSM and tutoring were compared, VSM combined with tutoring resulted in greater increases in oral reading fluency than tutoring alone.

Video self-modeling also appears to be effective for improving students' comprehension and textual responses. All four students showed improvement in comprehension ability during the intervention phase, and students made the most gains during the tutoring plus VSM condition. Gains were maintained at six months following intervention.

Video self-modeling may also be effective for helping students acquire letter identification skills. Three students with autism were selected as participants and all three students consistently had higher percentages of correctly identifying novel letters when shown self-models than when shown peer models.

### Writing

One study investigated the effects of VSM on writing skills with three adolescents with Asperger's Syndrome. All students increased the number of words written in essays during the course of the intervention; higher than baseline levels of performance were maintained three months following the intervention. Increases in the number of functional essay elements were evident during the intervention phase; however three months following the intervention, students did not maintain gains, with one student declining over time.

### Arithmetic

One study focused on improving students' arithmetic skills. Students who viewed peer models and self-models performed statistically significantly better than the students who were assigned to control groups.

### Behaviours that Influence Academic Performance

If students are to succeed academically, they must participate in academic activities and stay on task when completing academic work. The intervention produced immediate results, with the students' average on-task behaviour increasing from 33% to 86%. Following treatment, the students maintained intervention levels of on-task performance.

## IMPLICATIONS FOR PRACTICE

(by the authors)

- The results of these eight studies demonstrate that VSM can be an effective intervention for improving academic performance with school aged children.
- We interpret the current finding to indicate that VSM has promise for improving academic and related classroom learning skills.

- One limitation is that surprisingly few studies were located using VSM for improving academic skills. Additional studies replicating and extending this research will help solidify the knowledge base regarding VSM.
- Many advantages exist for the use of VSM in schools to improve students' academic skills. Of particular note are the following:
  - Videotapes or DVDs are permanent products that students can take home and continue to view, particularly during holidays or school breaks.
  - Video self-modeling can be easily combined with other interventions, such as direct instruction.
  - Most students enjoy viewing themselves in the videos, which may serve as a strong motivator for academic improvement.
  - The increasing use of iPads and other devices in classrooms has enhanced student access even further.
  - Some students can be trained to assist with the videotaping and editing, freeing the teacher and paraeducators to continue with their typical duties.
  - Because a permanent product has been created, other audiences, such as teachers and parents, can also view the videos.

### Full Reference

Prater, M.A., Carter, N., Hitchcock, C., and Dowrick, P. (2012). Video Self-Modeling to Improve Academic Performance: A Literature Review. *Psychology in the Schools*, 49(1), p. 71-81.

# INCLUSION FOR STUDENTS WITH HIGH FUNCTIONING AUTISM SPECTRUM DISORDERS: DEFINITIONS AND DECISION MAKING

## BACKGROUND

This study sought to investigate how educators from a variety of disciplines make decisions on how to include students with High Functioning Autism Spectrum Disorders (HFASDs). From the outset the authors referenced various research papers with which they concurred that given the challenges faced by students with HFASDs the requirement of supportive educational mechanisms were necessary.

## RESEARCH AIM

The purpose of this research was to study why decisions about including students with HFASDs remains a topic of controversy.

## RESEARCH METHOD

A school district in Florida was identified due to a disproportionate increase in the number of students on the autism spectrum. Four elementary (primary) schools were targeted which had autism inclusion programmes in place. Participants were selected using “purposeful selection” as part of the qualitative data analysis as comprised by Miles and Huberman, 1994.

Seventy educators were eligible but the two focus groups identified were capped at a maximum of eight participants. In total 15 educators attended two focus group sessions and participated in immediate subsequent individual interviews. The research took place in either the district’s main office after school hours or on the school site. Two focus groups were conducted prior to individual interview and they lasted 2.5 hours. The average interview lasted one hour. One interview was undertaken per participant. A structured moderator guide and questioning route was used to obtain a comprehensive understanding of the ways educators determine

an appropriate instructional placement for students with HFASDs.

The sample group was comprised of:

- a. General education teachers responsible for the delivery of inclusive education for students with ASDs.
- b. Special education and additional personnel (for example, behaviour specialist, school psychologist) who were involved with the instructional placement and decision making for students with ASDs.

The research was modelled on a three tier system by:

1. Examining the educator’s operational definition of inclusion.
2. Examining the common beliefs regarding inclusion of students with HFASDs.
3. Considering the key points in making placement decisions and the evaluations of the educator’s inclusion efforts.

## RESEARCH FINDINGS

While definitions of inclusion varied the overall view was that inclusion should happen as much as possible within the school setting. The following points were highlighted as being significant to the inclusion process of students with HFASDs.

1. Inclusion for students with HFASDs is fundamentally different from that of students with other disabilities, one of the main reasons being that assistance to create necessary supports is required.
2. Inclusion should be a flexible and variable model, developed on a case by case basis. Points such as the student’s age, academic strengths/weaknesses and communication

skills should be considered. It was agreed that inclusion is just another form of differentiated instruction and this was seen as a strength of the approach.

3. Participants noted that students with HFASDs were more likely to be in the general education environment and those with lower functioning autism were more likely to be placed in a self-contained special education classroom but would have “inclusion time”.
4. The point was made that only when their peers recognise the pupil as a classmate do they consider the child to be “truly included”.
5. Inclusion should mean not being dependent on an adult aide. In order to be fully included it was agreed that if a student is dependent on a full time adult then they are not fully included and this could be a “barrier to the student’s integration into the general education environment”. In general it was noted that the pupil with HFASDs was missing out on experiences which may have been beneficial to them and were not exposed to the social, academic and behaviour expectations of the mainstream setting because they had a one to one assistant.
6. It was noted that inclusion accelerates the skill development of students with HFASDs through engagement in challenging academic tasks and new social situations. Also entire classes were seen to benefit from class wide implementation of behaviour supports and teaching of social skills. How the educator also coped with and managed those with HFASDs was also noted as part of the inclusion process. While over half of the participants acknowledged the positivity of inclusion they referenced the degree of that success down to their efforts in making it effective.
7. It was acknowledged that students with HFASDs are likely to need and benefit from access to their typically developing (TD) peers who model age appropriate skills such as desirable behaviours. Participants felt that the general education environment “forced them to make progress”, meaning that the general education environment has a powerful impact on student motivation. Comments such as “the will for communication increased” were made to describe what happened when pupils with HFASDs were surrounded by receptive communication partners.
8. It was consistently noted that the strategies implemented for those with HFASDs were also useful with peers who had similar difficulties and could be used class wide. This helped students with HFASDs not “to stick out” as the only child who required support. Items such as picture schedules or behavioural supports were also seen to establish a motivating environment for all students and give clarity around expectations.
9. Limited understanding of HFASDs presented as the most significant barrier to successful inclusion. It was noted that this was due to colleagues receiving inadequate training about HFASDs and more than half of the participants stated that this limited training and limited exposure to working with students with HFASDs “harbours stereotypical or significantly limited definitions of the disorder.” It was also noted that this can have a negative effect on relationships with parents.
10. The majority agreed that a minimum level of academic skills is necessary even when instructions are modified. Participants also observed that when classroom instruction is significantly above the level of the student with HFASDs then the possibility of challenging behaviour occurs.
11. Seventy five percent of the participants saw communication as an important ingredient if the student with HFASDs is to be a “full member of the general education classroom.” However the need to consider the social skills deficits of students with HFASDs when making placement decisions and the impact this has was not considered in depth by the participants.
12. Several educators reiterated that all students with HFASDs should be included in some way even though they had self-care difficulties such as toileting needs, however it was noted that if they had significant adaptive deficits they should only participate in inclusion on a part

time basis or they may require additional adult support. The authors agree that having a narrow focus on toilet training as the sole adaptive behaviour concern of student with HFASDs identifies a need for training in the area of self-care skills.

13. Participants were very clear that the inclusion of those with HFASDs should not compromise the learning, safety and overall well-being of their peers within the general environment.
14. Some participants noted that when there are fewer support personnel available educators are likely to face challenges, with conflict among staff regarding which students need the most support and conflicts with parents in meeting individual needs. This may even mean that students may need to attend a different inclusive placement or be recommended for a more restrictive placement even when the team has evidence to suggest the student could be successful in inclusion with the appropriate support.
15. Several participants emphasised the need for a consistent approach to inclusion and this should be supported by consistent service delivery to share the responsibility of educating students with HFASDs across all district schools. Both these examples conflict somewhat with the general participant sample which was that inclusion should be individualised on a “case by case basis.”

### *Limitations of Study*

- The authors concur that the participating district may not be a typical entity in their approach to inclusive education for student with HFASDs.
- The participants may have represented a group of professionals who were more knowledgeable about autism and possessed a positive disposition about inclusion.

- The authors acknowledge that more direct observation of the actual process of educational decision making within multi-disciplinary teams may benefit future research. Future studies should also attempt to study the broad outcomes of future included student with HFASDs.
- Based on the criteria used the sample size is small with just 15 participants taking part due to focus group constraints; the criteria used would have permitted 70 participants which may have provided more information to qualify.

## IMPLICATIONS FOR PRACTICE

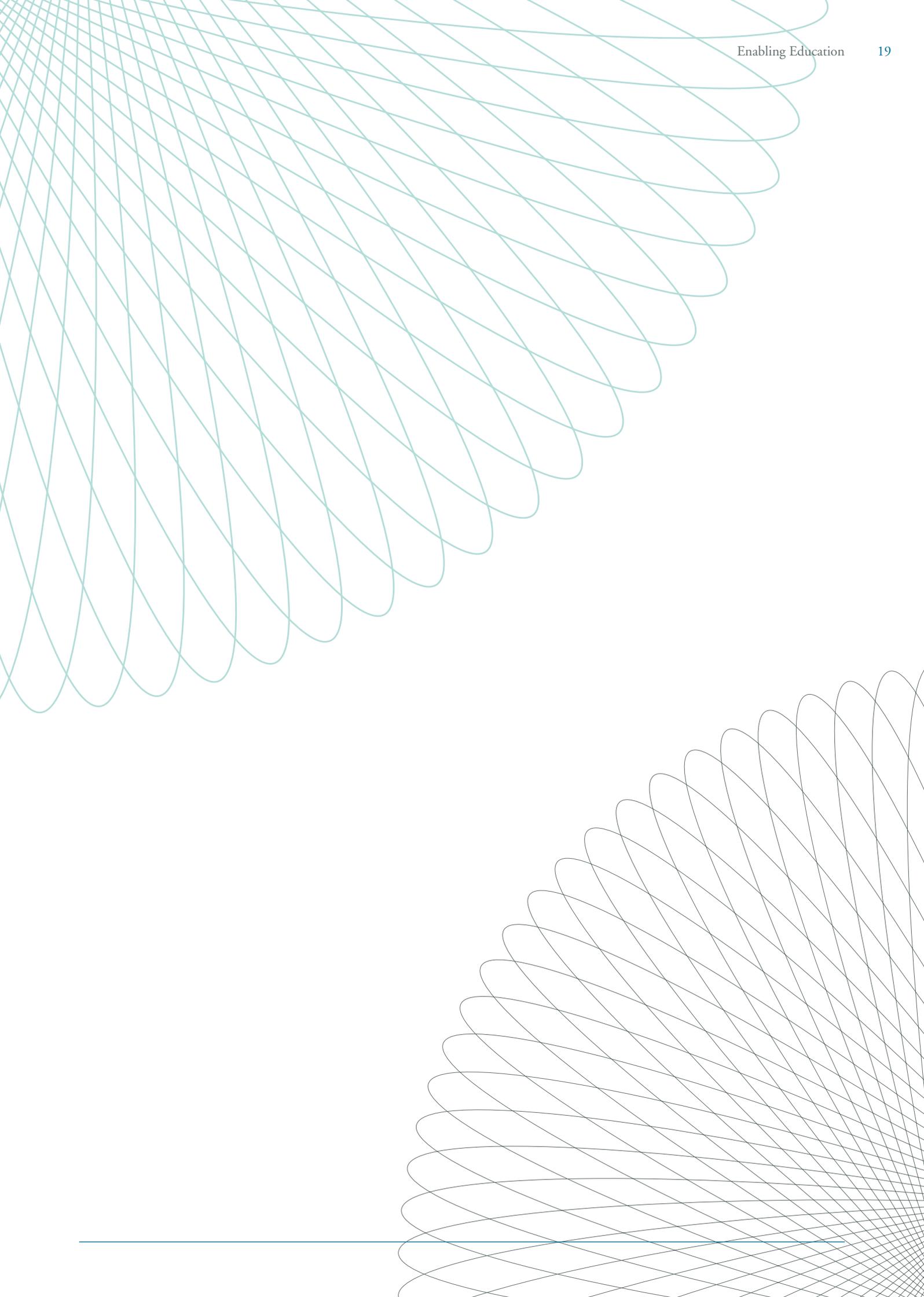
Professionals across environments who work alongside students with HFASDs should have:

- a. A thorough understanding of the impact of HFASDs on students and how they learn taking into consideration the realities of inclusion.
- b. An understanding and ability to use assessment strategies to analyse specific support needs.
- c. Be able to provide effective techniques for improving the behavioural, social and academic outcomes of students with HFASDs.

\*In order for the above to occur the authors acknowledge that those outside of the immediate school environment who also work towards the inclusion of those with HFASDs need to identify, evaluate and implement the use of assessment methods that consider both the abilities and skill deficits of the child and the differentiated programme that supports their learning.

### Full Reference

Sansosti, J.M. and Sansosti, F.J. (2012). Inclusion for Students with High Functioning Autism Spectrum Disorders: Definitions and Decision Making. *Psychology in the Schools* (49), p. 10.



# INVESTIGATING THE SOCIAL ENGAGEMENT OF CHILDREN WITH AUTISM IN MAINSTREAM SCHOOLS FOR THE PURPOSE OF IDENTIFYING LEARNING TARGETS

## RESEARCH AIMS

The aim of this study was to investigate the social engagement of children with autism and their peers within a mainstream school as a means of identifying learning targets relevant to the social processes being investigated. Focus within this study was not placed solely on the individual child, instead it involved looking at the social, emotional and cultural context in which the child with autism was situated. This study is important as research indicates that the development of social engagement is a key need for children with autism and that whilst these children do socially engage, it is often peripheral and in ways that may be different to other children. Furthermore, autism education has tended to focus on the individual child, however research has shown that children's social-emotional learning is based on dyadic experiences and group processes.

## RESEARCH METHOD

This study employed a qualitative research design using a Mosaic approach. The Mosaic approach involves two stages: an initial stage whereby information is gathered using multiple methods, and a second stage where information is compiled and then reflected upon by the researcher together with children, practitioners and parents.

The design within this study looked at similarities and differences in social engagement within three different social groupings, namely: the wider class group, the smaller peer group within which the child with autism was included and the individual participation of the child with autism compared with the smaller peer group. The participant of the current study, Kyle, was recruited from a mainstream school in the inner city local education authority. Kyle was a nine year old child with a diagnosis of autism within the "severe" range. Other participants included the class teacher and

Kyle's support worker. This study focused on three important areas of social behaviour as a whole, namely: social interaction, friendship and play.

The first stage of information gathering using the Mosaic approach began by carrying out ten hour-long observations over a four-week period. Three semi-structured interviews were then conducted with Kyle's class teacher, support worker and mother. Interview questions included: "Describe the main social activities of Kyle's group", and "Are there strong friendships in the group?" to name a few.

Kyle and members of his identified peer group were then asked to participate in semi-structured conference sessions with the researcher before the children and adults were both gathered to complete the second review stage of the Mosaic approach.

## RESEARCH FINDINGS

Research findings indicated that within the wider class group, children tended to have a social network which extended across several classes and that friendships were partly defined by their play. Two main play themes were ball games and chatting to others, singing and making-up dance moves. A further play theme identified was imaginative action-adventure play.

In relation to Kyle, a child with autism, findings illustrate how his social engagement was aligned with the social patterns of his class group and the more specific cultural routines of his peer group in a number of ways. Kyle was found to be part of an established group of male peers from different classes who shared interests, namely imaginative action adventure play, who played regularly together and expressed an enjoyment of being together. The group was made up of peers, some of whom had some form of need and were marginal in relation to the whole peer group. They conformed

to gender relations and their play interest was typical of other peer groups within the school. The group also shared a particular understanding of friendship, participating in the peer culture of describing peers as friends or friends of friends or part of the team.

An important cultural routine within Kyle's group was the extensive use of non-verbal gestures, sound effect noises, spoken phrases and special poses borrowed from media sources during play. Kyle's competency in using these appears to have contributed to the view of his social engagement as appropriate and of interest to other children. The information gathered in this case study is also consistent with the fact that Kyle's social experiences in school reflected his autism. He had a strong special interest which centred on the films and programmes he watched. He played imaginatively but was limited in terms of flexibility and social sharing in play. Interestingly such social difficulties were not necessarily seen as a difficulty, rather as a strength, e.g. Kyle was seen as someone with a strong imagination who brought inventive ideas to his talk and play. It may be noted however that Kyle's ability to play imaginatively impacted on his ability to focus in class.

Another very distinctive aspect of Kyle's participation found by this study was that he always took the leadership role in the action-adventure games he played with his peers. It is probable that Kyle's autism and subsequent difficulty in sharing his imaginary experience at an interpersonal level contributed to his need always to take the role of leader in the peer group's imaginative play, but his peers' relatively weaker imaginative and play skill resources were probably the reason why they were happy to allow him to do so.

## IMPLICATIONS FOR PRACTICE

(by the authors)

This study is important as it highlights that children with autism can socially engage and apply this in ways that are perceived by others as competent. It also highlights the need for careful analysis of group processes for children with autism in mainstream schools and how knowledge can be gained by adults if carefully reconstructed with children themselves. Therefore, given that autism research and practice has primarily focused on interventions and teaching strategies this study raises the question that perhaps it is time to look at assessment and reflective practice instead. It also queries whether autism education should be more concerned with finding ways of adapting practice that exists and is already understood to support children with autism in mainstream schools. The purpose of this approach would be to gauge the social strengths and weaknesses of all children within a group that included a child with autism, and to find out what existed in the environment to support or constrain social inclusion. Such an approach is good practice as it views assessment as an interactive process, a process which resulted in this particular case study in clearer learning targets being set for Kyle's individual education plan, and made practitioners feel more certain about what they needed to do in order to support his development.

It may be noted however that the authors recognise that the findings of this study are based on a single case study design and thus are not generalisable to other children with autism or their peer groups. In future research therefore it would be beneficial to include more participants across communities.

### Full Reference

Conn, C. (2014). Investigating the Social Engagement of Children with Autism in Mainstream Schools for the Purpose of Identifying Learning Targets. *Journal of Research in Special Educational Needs*, 14, p.153-159.  
doi:10.1111/1471-3802-12010

# EDUCATING CHILDREN ON THE AUTISM SPECTRUM: PRECONDITIONS FOR INCLUSION AND NOTIONS OF “BEST AUTISM PRACTICE” IN THE EARLY YEARS

## RESEARCH AIMS

This review article aims to identify the preconditions for developing inclusive learning environments for young children on the autism spectrum. A further aim is to highlight the essential elements of “best practice” in caring for and working with young children on the autism spectrum.

## RESEARCH METHOD

The article discusses “best practice” by reviewing a number of research papers, wider literature on early years intervention, developments within policy and expert opinion.

The article has two sections, the first of which discusses “best practice” within Early Years Foundation Stage (EYFS), which became statutory in England in September 2008. The second section focuses on the developmental areas in which children with ASDs are most likely to need support.

## RESEARCH FINDINGS

### *Preconditions for inclusive practice*

In reviewing a number of literature sources, the authors define inclusion as being the process of identifying, understanding and breaking down barriers to participation and belonging. This definition therefore, goes beyond education to cover the total experience of a child or young person on the autism spectrum and his/her family. The authors emphasise the need for intervention to be a two-way process that relies on typically developing people adapting their communication styles and their learning environments to the person on the spectrum. It should happen in an environment where staff are willing and able to be flexible in terms of how the curriculum is delivered and to adapt the routines and physical environment within which the child is being educated.

The EYFS framework principles form the basis of the discussion of “best practice” and the implications for practice, as they align well with current research in educational interventions for children with autism: “a unique child”, “positive relationships”, “enabling environments” and “learning and development”. These principles focus on understanding the needs, strengths and personalities of individual children, the importance of working in partnership with families and other professionals, an emphasis on creating enabling environments and the need to be informed by a developmental approach to learning.

### *Developmental areas*

#### **Functional communication**

The authors state that it is crucial for both cognitive and social development that children can communicate their wants and experiences and understand the communication of other people. Research suggests that joint attention and symbol use are the most important developmental areas to focus on as these are crucial to enabling interpersonal learning through social interaction. Wider research also shows that children on the autism spectrum benefit from symbolic communication systems and several studies have demonstrated the efficacy of using pictorial approaches.

#### **Social understanding and skills**

Research also highlights a clear recognition that difficulty with social understanding and skills for children on the autism spectrum permeate academic, emotional and social development. The authors state that it is crucial to address this area of development for children with ASD. Input should focus on understanding body language and eye contact, emotional recognition and understanding, perspective taking and conversational skills.

### Learning through and with other children

Crucially, children on the autism spectrum need support to establish relationships and to learn through and with other children in the way that typically developing children do. Several studies have shown that interventions between children on the spectrum and their peers are a priority and can be particularly effective.

### Play

Children on the spectrum are likely to have delay in play, often following rigid routines and patterns in their play. Studies have highlighted that structured intervention can impact in a positive way on children's play skills. These interventions involve teaching children play skills in a controlled and structured environment, followed by opportunities for the children to use those skills in free play sessions.

## IMPLICATIONS FOR PRACTICE

- One of the key difficulties in developing a notion of shared needs for children with ASD arises from the diversity that exists within the population. This highlights the importance of focusing on each child as “unique”. Interventions need to be child-specific, based on careful assessment of the individual, and reflecting their strengths, interests and preferences.
- Children with ASD need educational interventions that are built on understanding of their condition coupled with knowledge and understanding of the individual child. Those working with children with ASD should have, as a minimal requirement, basic knowledge of the diad of impairments and their educational implications, as well as knowledge of theories that highlight the difficulties faced by children with ASD, including cognitive and psychological theories and sensory processing difficulties.
- Expert opinion and empirical studies also highlight that it is crucial to create enabling environments for children with ASD. An autism friendly environment needs to be based on individual assessment, involve parents and carers, focus on social understanding and communication, be developmental and structured and use visual supports.
- Ongoing parent and teacher collaboration is an essential foundational element in the education of children with ASD. There is also a need to develop good collaboration between different professionals. This is particularly important during times of educational transitions.
- Professionals should be aware of the importance of the key developmental areas highlighted in this paper: communication and language; social understanding and skills; learning with and through peers; and overt teaching of play behaviours.

### Full Reference

Guldberg, K. (2010). Educating Children on the Autism Spectrum: Preconditions for Inclusion and Notions of “Best Autism Practice” in the Early Years. *British Journal of Special Education*, 37(4), p. 168-174. doi:10.1111/j.1467-8578-2010-00482.x

# COMMENTARY: BRIDGING THE RESEARCH AND PRACTICE GAP IN AUTISM: THE IMPORTANCE OF CREATING RESEARCH PARTNERSHIPS WITH SCHOOLS

## BACKGROUND

The UK Government has invested considerable funds into researching models of best practice in the education of children and young people with autism. Some of these recommended models are being implemented in schools, however, the efficacy of such models has yet to be established. There is also a need to develop more effective working relationships between research institutions and schools.

## RESEARCH AIMS

The authors aim to determine the extent to which Government led research into practice in autism has an impact on schools and teachers. It includes commentary from teachers in schools and offers perspectives from teachers. The article ultimately provides a model of collaboration between teachers and researchers.

## RESEARCH METHOD

This was not strictly a research driven article; key staff in autism specialist schools e.g. school Principal were given the opportunity to comment on their experiences of research in their school. The researchers used these commentaries to build a broad template for the execution of autism research in schools. The method combined the authors' own expertise in this area along with the expertise and experience of the school Principals.

## RESEARCH FINDINGS

A review of the literature relating to schools and research institutions highlighted the following issues:

- There is a gap between research-based recommendations made for classroom practice and its translation into actual school practice. This leads to the question - how can there be a better uptake of evidence-based practice in schools?
- Researchers are often seen as the “experts” who create new packages and education professionals are not always seen as equal partners in either conducting research or in the implementation of practice coming from research.
- Practitioners are likely to alter practices based on their own context, the individual needs of the child, the desired outcomes for the child, their educational setting and their own skills sets as teachers. This means that often there are differences in how programmes are conducted.
- Teachers and classroom paraprofessionals are frequently skilled in research, completing higher degrees and having research skills. They can be an untapped resource for the research community.

The issues above indicate that translating research recommendations into classroom practice requires a more collaborative and workable model.

Schools can be viewed as excellent centres for research; teachers and paraprofessionals working within the classroom collect data daily and this is done across a variety of children and school environments. Including the school and the education professionals working within the school may improve the translation of research into practice by adding in the contextual element. The authors note that those researchers that included a collaborative element in their research observed a higher degree of “treatment integrity” in their approach.

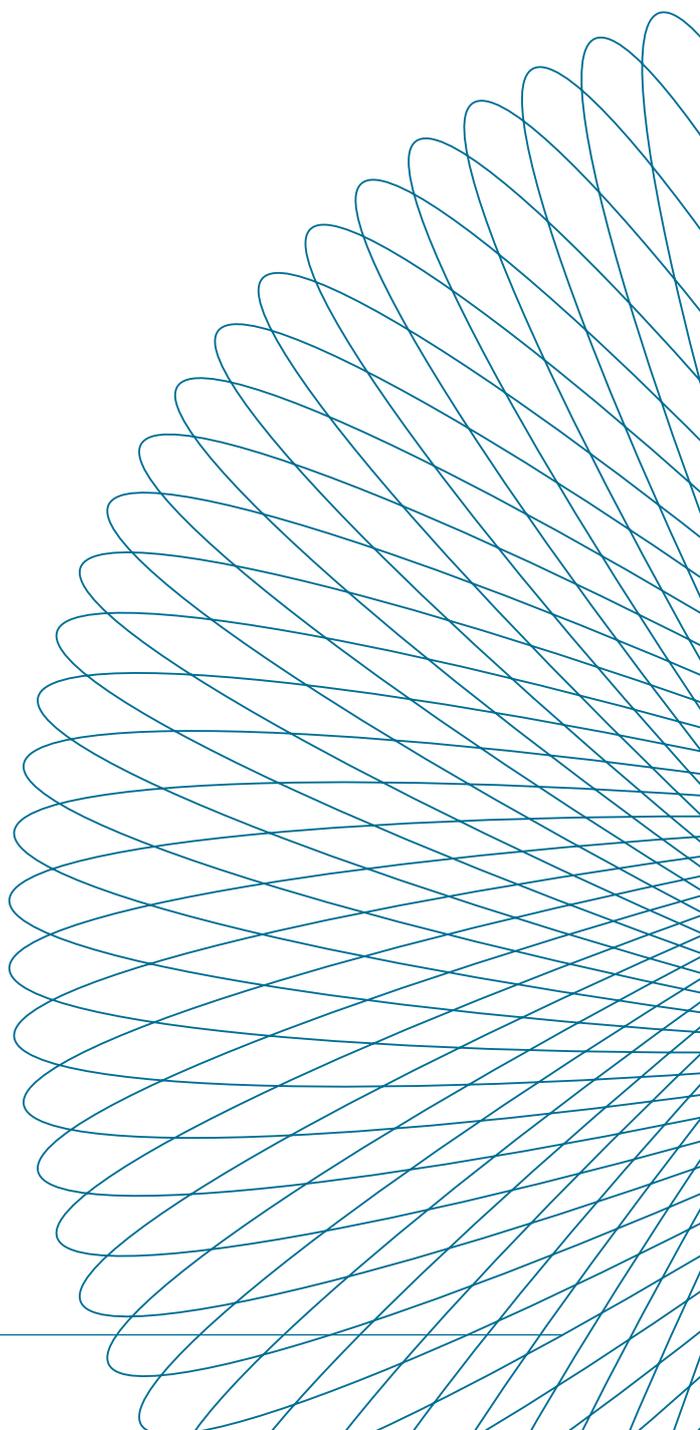
## IMPLICATIONS FOR PRACTICE

The authors use the example of the Pan London Autism Schools Network (PLASN) as an exemplar of a working model between schools and research institutions. The PLASN started as a group of Autism School Principals coming together to discuss and share practice, however, they quickly realised that some of their questions needed research input. A meeting of some of the school Principals and some recognised autism and education researchers was subsequently organised which resulted in a concerted set of discussions, information exchanges and ultimately research questions being agreed across the Principals and the researchers. This is mutually beneficial, as often researchers can have difficulties accessing samples and school Principals haven't been sufficiently engaged to support their work.

The main implication for practice in Northern Ireland and Ireland is the consideration of closer and more equitable collaborations between schools and research institutions. This may lead to more realistic programmes for schools being recommended; better integrity of interventions and a higher return on research that is conducted.

## Full Reference

Parsons, S., Charman, T., Faulkner, R., Ragan, J., Wallace, S. and Wittemeyer, K. (2013). Commentary: Bridging the Research and Practice Gap in Autism: The Importance of Creating Research Partnerships with Schools. *Autism* 17 (3), p. 268-280. doi:10.1177/1362361312472068



# INCLUSIVE EDUCATION AND BEST PRACTICE FOR CHILDREN WITH AUTISM SPECTRUM DISORDER: AN INTEGRATED APPROACH

## RESEARCH AIM

The purpose of this review was to provide a description of inclusive education and best practice for the education of children with ASD. The researchers aimed to compare inclusive education models with ASD specific educational models to extract commonalities which may guide a new integrated educational approach.

## RESEARCH METHOD

In this literature review the authors reviewed articles that were concerned with “authentic inclusion” and those that advocated for ASD-specific education. This was followed by a discussion of the family experiences of the inclusive education and general education system.

## RESEARCH FINDINGS

The researchers offered a renewed strategy for improving educational services for children with autism which is detailed under the headings below.

### *Defining inclusion*

The American heritage dictionary defined inclusion as the “act of placing in a group or class”. This definition is not elaborate enough to capture the intricacies of inclusive education. Inclusion is not just an issue of placement, as it requires an individualised needs based approach. Authentic inclusion will be used for the purpose of this paper as it encompasses the essential characteristics of inclusion as described in previous literature. “Authentic inclusion is a unified system of public education that incorporates all children and youths as active, fully participating members of the school community; that views diversity as norm; and ensures a high quality education for each student by providing meaningful curriculum, effective teaching, and necessary supports for each student.”

### *A model of inclusive education*

The researchers noted seven essential elements of the inclusion model which are most representative of authentic inclusion. The elements included:

1. Visionary leadership.
2. Collaboration.
3. Support for staff and students.
4. Effective parental involvement.
5. Refocused use of assessment.
6. Appropriate level of funding.
7. Curricular adaptation and effective instructional practices.

### *Family and student experiences in inclusive education*

Overall, families of students with disabilities who are fully included in school systems tend to be content with the services their children are provided with. Many parents report that the social benefits of inclusive education supersede any other component of inclusion. Furthermore, children in inclusive settings appear to be better accepted by their typically developing peers. With this increase in peer acceptance, the children have increased opportunities for social learning and other life skills. As authentic inclusion is assessment based, individualised, and provides an inclusive classroom, disability specific support is not required.

### *Disability-specific supports for children with ASD*

Similarly to the inclusive education initiative, various attempts have been made to identify the most successful educational interventions for children with ASD. Earlier research found eight of the most widely published and cited educational interventions to determine program similarities. The research postulated that if similar program elements could be extracted from existing interventions, these could be used to guide future

educational programmes. Six commonalities were isolated which included:

1. Specialised curriculum content.
2. Highly supportive teaching environments and detailed generalised strategies.
3. Predictability and routine.
4. Functional approach to challenging behaviour.
5. Transition support from the previous school environment.
6. Family involvement.

These elements have subsequently been synonymous in best practice in a variety of educational interventions for children with ASD. It was noted that the majority of children reviewed responded well to the various interventions. However, not all children respond equally well to an intervention, therefore, it cannot be stated that children with ASD experience the best possible outcomes when one particular methodological approach to intervention is used. As a result of these findings, educators should be warned against focusing on one educational approach at the expense of best practice. Despite this caution, many educators, authors and advocacy groups continue to advocate for ASD specific interventions.

#### *Families of children with ASD and their experiences in the education system*

During an investigation of family experiences, researchers found an inverse relationship between children's age and parents' satisfaction of the inclusive classroom. As children with ASD grew older, parents were less satisfied with the educational service their children were receiving in the inclusive classrooms. Furthermore, in an investigation of parents' experiences within the general education system, it was found that approximately equal numbers of parents reported satisfactory and dissatisfactory feelings in relation

to their children's education. The research further noted several trends of dissatisfaction such as IEPs not being individualised, lack of communication between home and school and lack of parental involvement. It is clear from the above research that children with ASD are not having their needs fully met in the school settings. It must be noted that the reports above may be referring to a "mainstream" education system, which prepares a student to function in a classroom, rather than preparing a classroom for a student. However, the data offered still demonstrates evidence that parents of children with ASD are not receiving the educational services they need.

#### *A new hope: Integrating best practice for ASD and inclusive education*

As seen from the reviews above there is no guarantee that children with ASD will receive the educational services as outlined in best practice literature or authentic inclusion. The financial constraints of many educational systems often mean that children with ASD do not access the educational support services they require. Furthermore, in order to provide funding to a disability specific service, this often means reducing supports for other students who are in need. To overcome this, the authors suggest integrating ASD specific supports into a general inclusive education framework. By joining forces with those in the inclusive education system, students with ASD can access the appropriate educational supports. Additionally, by amalgamating the two educational systems, one larger advocacy group could be created which increases the power for lobbying for resources in the future. The authors suggest combining the inclusion model with the best practice for ASD model and extracting the commonalities. The current authors suggest that leadership and funding are necessary pre-requisite elements of an educational model. With this in

mind, an additional four commonalities were noted to form a new integrated educational model:

*Prerequisite (visionary leadership and adequate funding)*

1. Instructional practices - assessment strategies, adapted curricula, measures of progress.
2. Student and staff supports - providing predictable routines for students, allowing preparation time and continuing professional development for staff.
3. Multidisciplinary, multisite collaboration - co-operation between teachers, psychologists, assistants, therapists and other community based professionals.
4. Family involvement - the involvement of family members or guardians to promote consistency. Regular meetings, report cards, newsletters and reviews.

Consistent with the model of authentic inclusion the new integrated model offered by the authors offers the potential to serve all children both with and without disabilities. Furthermore, the educational model allows for children who require an individualised education program to access the necessary supports to maximise their success in school.

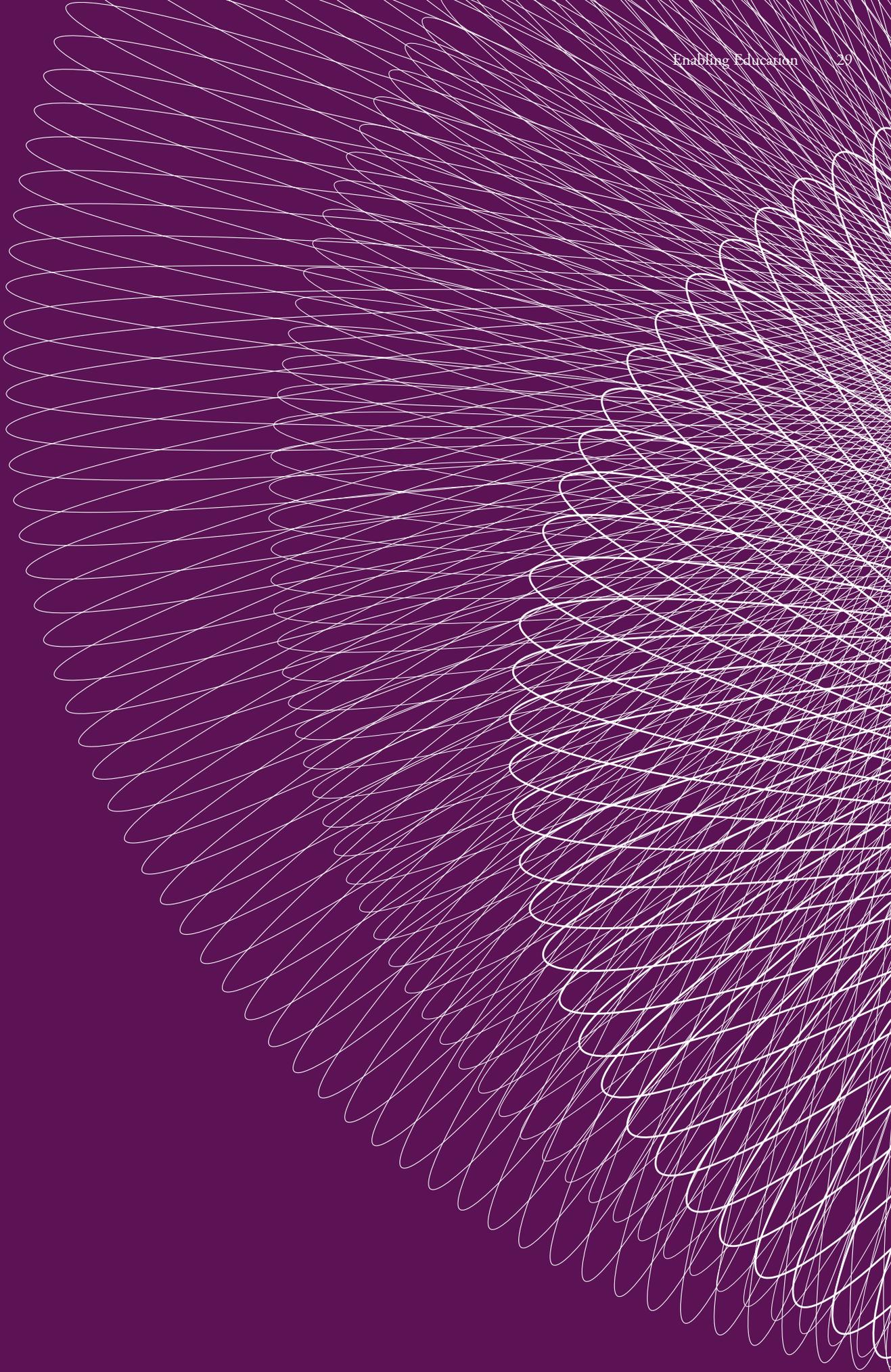
## IMPLICATIONS FOR PRACTICE

(by the authors)

This review highlights the importance of understanding the term “inclusion” and how this differs to “mainstreaming”. Many classrooms label themselves as “inclusive environments”, however, in many of these cases an individualised approach is not being used, and the children are being expected to conform to a single classroom programme with few modifications. The authors reiterate the main goal of inclusion, which is to meet the needs of all children within the classroom. They further suggest that a clearer, universal definition of inclusion needs to be agreed so that inclusion entails the social and academic success of all students.

### Full Reference

Lynch, S.L. and 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), p. 845-849.



# IMPLICATIONS FOR PRACTICE FROM “INTERNATIONAL REVIEW OF THE EVIDENCE ON BEST PRACTICE IN EDUCATIONAL PROVISION FOR CHILDREN ON THE AUTISM SPECTRUM”

## BACKGROUND

There is now a plethora of information and research on Autism Spectrum Disorders, specifically on interventions that may be effective in supporting children and young people with a diagnosis of autism. In consideration of the range of interventions advertised and claims of effectiveness, families, teaching staff and service providers need a way to make sense of the information available. This review of the research evidence, commissioned by the National Council for Special Education, is one way of weighing up the strengths and challenges of various educational approaches to teach children and young people with autism.

## RESEARCH AIM

The aim of the current paper was to identify and summarise key implications for practice arising from the original paper “International review of the evidence on best practice in educational provision for children on the autism spectrum”. The primary focus of this paper is on findings related to the early years.

## RESEARCH METHOD

This review took into account research evidence, policy development and expert opinion. Researchers focused on the themes of educational provision and interventions, learning and development, positive partnerships and training.

## RESEARCH FINDINGS

This review of evidence has highlighted that there is a need for more extensive and robust research evidence to guide the educational provision made for children on the autism spectrum.

### *Educational Provision and Intervention:*

- In the UK and Ireland, the majority of children on the autism spectrum are currently educated within mainstream schools, but a significant number attend either special schools or specific autism provision attached to mainstream schools.
- It is clear that an “eclectic approach” is used across all settings to meet the needs of individual children. Research evidence is lacking with regard to the impact of these classes on children’s outcomes and the extent to which children are included with peers not on the autism spectrum.
- The review also demonstrated that there is no research evidence which suggests that a single intervention will successfully meet the needs of all learners which concurs with findings from other research. The process of deciding on a particular intervention should consider factors such as child characteristics, parental preference, staff expertise and the goals selected.

### *Learning and Development*

- The current review identified that children on the autism spectrum require specialised intervention that supports the development of functional spontaneous communication and language, social understanding and joint attention, peer interaction and play.

### *Positive Partnerships*

- The research literature clearly demonstrates that ongoing collaboration between parents/carers and education staff is an imperative component in effective education. Parents should work closely with teachers in developing objectives and planning interventions.

### Training

- Extensive training on a range of autism-related topics should be available to parents/carers and practitioners. Such training needs to be closely evaluated to establish what influence this has on practice and ultimately on the outcomes of individuals with autism spectrum disorder.

### IMPLICATIONS FOR PRACTICE

- Practitioners, researchers and policy-makers are required to become actively involved in building an evidence base for different types of provision so that it is possible to make informed decisions regarding the effectiveness of interventions on outcomes for children with autism in the short and long terms.
- Language and cognitive levels need to be considered when deciding which interventions may be effective and appropriate. For example, structured and less structured teaching approaches, using different modes of presentation (e.g. information and communication technology, pictures, videos) proved useful for promoting specific learning outcomes.
- Practitioners and researchers need to develop a way of ascertaining the views and perspectives of individuals on the autism spectrum to inform decisions.
- Multi-agency working is imperative to coordinate essential services for individuals on the autism spectrum including education, social care, health, and support from the voluntary and independent sectors.

### Full Reference

Guldberg, K., Parsons, S., MacLeod, A., Jones, G., Prunty, A. and Balfe, T. (2011). Implications for Practice from 'International Review of the Evidence on Best Practice in Educational Provision for Children on the Autism Spectrum'. *European Journal of Special Needs Education*, 26(1), p.65-70. doi:10.1080/08856257-2011-543532

# POSTSECONDARY PATHWAYS AND PERSISTENCE FOR STEM VERSUS NON-STEM MAJORS: AMONG COLLEGE STUDENTS WITH AN AUTISM SPECTRUM DISORDER

## BACKGROUND

Little is known about postsecondary pathways and persistence among college students with autism in the USA. Previous research has indicated college courses such as science, technology, engineering and mathematics (STEM) seem to acquire the highest rates of enrolment amongst students with autism when compared to students without autism. However, high rates of college enrolment for either STEM or non-STEM courses may not necessarily translate into high rates of college persistence and graduation.

## RESEARCH AIMS

This research study aimed to address the following questions:

- What are the postsecondary pathways for STEM majors versus non-STEM majors among college students with autism?
- What are the persistence rates among STEM majors versus non-STEM majors among college students with autism following different pathways?
- What are the associative factors of persistence of STEM majors versus non-STEM majors among college students with autism?

## RESEARCH METHOD

This study analysed data from the National Longitudinal Transition Study-2 (NLTS2), 2001–2009, a nationally representative sample of students in special education with autism. NLTS2 used telephone interviews, mail surveys and in-person student assessment and interviews.

This study used information collected at five time points from the NLTS2 study; during parent and young person telephone interviews and mail surveys in which the young people with autism were old enough to go to college. In total 920 young people were included in this study at time point one which reduced to 660 at time point five.

Questions asked at these time points included topics such as the type of course students were enrolled in e.g. community college or university or both; subjects e.g. STEM courses or non-STEM courses; reasons for drop out or persistence.

Descriptive analyses were presented for all college students with autism enrolled in STEM majors and non-STEM majors. Logistic regression models were used to predict college persistence based on student background characteristics, postsecondary pathway, and college major.

## RESEARCH FINDINGS

A summary of the results for each question is presented below.

What are the postsecondary pathways for STEM majors versus non-STEM majors among college students with autism?

- STEM majors were more likely to be male (male 94.02% female 80.55%).
- A total of 81.33 % of college students with autism attended a two-year community college (49.73 % attended a two-year community college and 31.60 % attended both a two-year and a four-year college), compared to 18.67 % who entered a four-year university directly after high school.

What are the persistence rates among STEM majors versus non-STEM majors among college students with autism following different pathways?

- Among college students with autism who started at a two-year community college and only attended a two-year community college, STEM majors were significantly more likely to persist than their peers in non-STEM majors (80.68 vs. 47.39 %).
- Among college students who attended a four-year university, there was no difference in persistence rates between STEM majors and non-STEM majors.
- What are the associative factors of persistence of STEM majors versus non-STEM majors among college students with autism?
- STEM majors with autism were more likely to persist and stay in college, than non-STEM majors with autism.
- Among all college students with autism, male students had significantly higher odds of persisting in college than their female peers.
- College students with autism whose parents attended postsecondary education institutions had higher odds of persisting in college than their peers whose parents never attended postsecondary education institutions.
- For some students with autism who have not graduated from high school, community colleges may be a promising route to further advance their training and education.
- An important policy implication derived from these findings is to take advantage of community colleges' well-positioned role as a critical stepping stone for additional postsecondary education or entrance into the workforce.
- This study found that the majority of students with autism attend community college, therefore community college professionals should be provided with professional development opportunities and support to provide high quality services to students with autism.
- Future research needs to further explore the barriers to college persistence and how these may vary depending on the field of study in order to determine the specific supports and services that can contribute to higher persistence and graduation rates for students with autism in both STEM and non-STEM majors.

## IMPLICATIONS FOR PRACTICE

- This study provides a picture of college pathways and persistence for college students with autism in America.
- Community colleges are an important and well used pathway for students with autism. School and college staff should work together to educate students on the range of college opportunities available to them and to ease the transition between the two environments (MCA staff suggestion).

## Full Reference

Wei, X., Christiano, E. R., Jennifer, W. Y., Blackorby, J., Shattuck, P. and Newman, L. A. (2014). Postsecondary Pathways and Persistence for STEM Versus Non-STEM Majors: Among College Students with an Autism Spectrum Disorder. *Journal of Autism and Developmental Disorders*, 44(5), p. 1159-1167. doi:10.1007/s10803-013-1978-5

# ADDRESSING THE ACADEMIC NEEDS OF ADOLESCENTS WITH AUTISM SPECTRUM DISORDER IN SECONDARY EDUCATION

## BACKGROUND

The presence of autism has been associated with poor post-secondary outcomes. According to findings from the National Longitudinal Transition Study-2 (NLTS-2) college enrolment for individuals with autism is among the third lowest of all eleven disability categories. It is estimated that only 37% of young adults with autism are employed, most work part-time. One study found that individuals with autism without learning difficulty (LD) are three times more likely to be unemployed and participate less frequently in recreational activities than individuals with autism and LD.

## RESEARCH AIM

The aim of this article is to present an overview of current knowledge around academic instruction for individuals with autism, specifically (a) how characteristics associated with ASD can impact academic performance, (b) academic profiles of individuals with autism across content areas, and (c) interventions that have been successful in improving academic or alternate achievement standards.

## RESEARCH METHOD

This article aims to present the current body of knowledge around academic instruction for the population of young people with autism. The authors have not identified how the articles were selected, no inclusion or exclusion criteria are noted. From the listed references articles are dated between 1985 and 2013.

## RESEARCH FINDINGS

### *Impact of Student Characteristics on Academic Performance*

- Limited social initiation may contribute to academic difficulty, as students may not seek out social and verbal learning opportunities and miss opportunities to gain valuable information from the environment.
- Social communication impairment is a significant predictor of reading comprehension, these deficits limit reading above and beyond the influence of word recognition and oral language deficits.
- Delayed or limited receptive and expressive communication may also affect academic performance across content areas, impacting primarily on comprehension and understanding of vocabulary and sentence structure.
- Students with autism may have difficulty disengaging from repetitive or stereotypic behaviours, which can interfere with school activities.
- Research indicates individuals with autism may process auditory or linguistic information at a slower rate than their peers, in addition processing verbal and visual stimuli simultaneously may also be difficult.
- Many individuals with autism show enhanced visual mental imagery or “visual thinking” as compared to individuals without autism.
- Individuals with autism may exhibit a bias towards local processing (e.g., detail; weak central coherence [WCC]) rather than global processing (“big picture”).
- Executive function processes such as behavioural regulation (e.g., inhibition) and metacognition (e.g., manage self and tasks). The ability to plan

- multistep sequences of events, demonstrate mental flexibility, reflect and reason are often impaired.
- Individuals with autism may demonstrate difficulty in recognising and understanding the mental states of themselves and others and have deficits in their understanding of irony, symbolic language and deception.
  - The memory challenges experienced by individuals with autism are around the ability to recall words, stories, and sentences, as well as memory within the context of day-to-day activities such as people's names, locations, and appointments.
  - Understanding the profile of students with autism is complex, as they often have uneven skill profiles or splinter skills that make accurate assessment and support more difficult.

#### *Academic Performance of Students with Autism*

While individuals with autism may share common diagnostic features, there is a great heterogeneity across the spectrum. This variability, in combination with a limited body of research, makes it extremely difficult to draw general conclusions about academic performance.

- Longitudinal study has revealed that while students with autism develop reading skills as they progress through formal schooling, the rate of their reading improvement is significantly slower than that of students with learning difficulties.
- Many students with autism show a unique profile of reading performance that includes strengths in the mechanics of reading (i.e., word decoding) coupled with difficulties in reading comprehension.

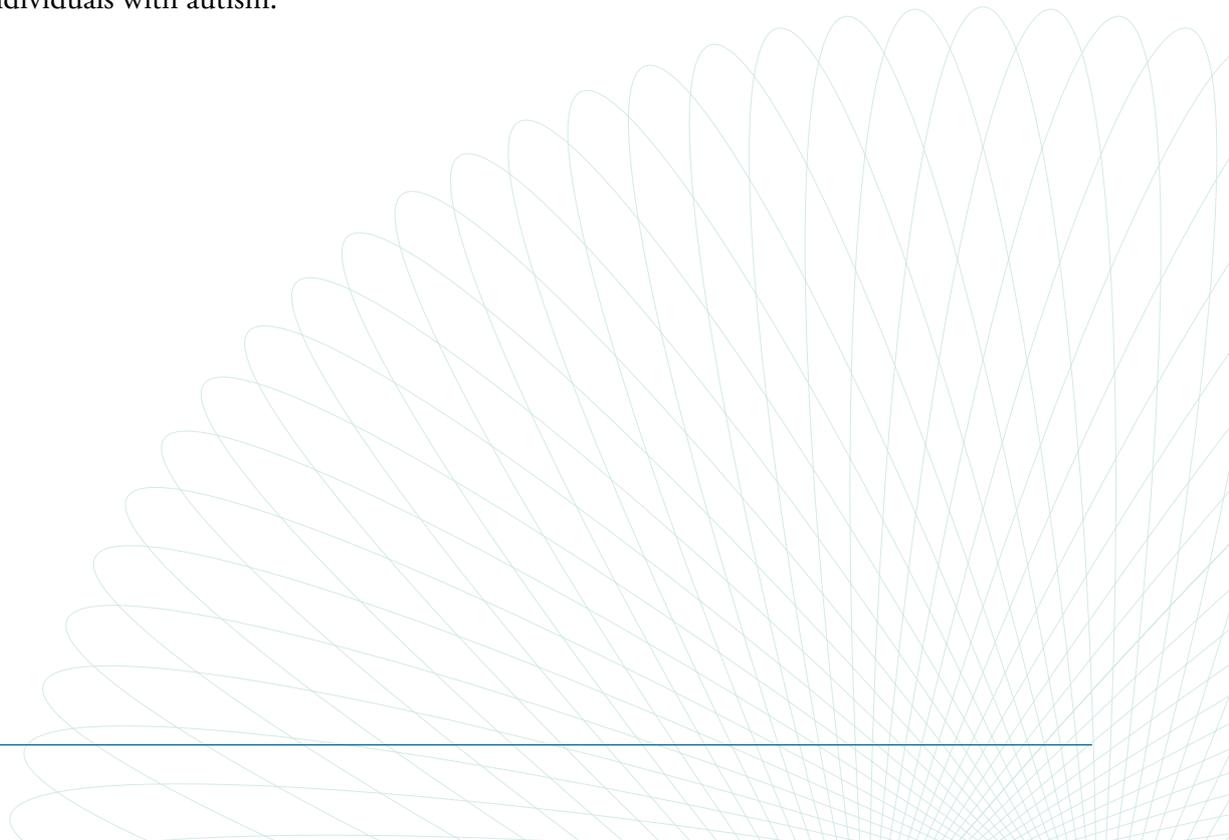
- The writing difficulties that students with autism encounter may be attributed to both the mechanics of writing (i.e., handwriting) and content-related aspects of writing.
- Individuals with autism have poor fine motor skills and difficulties with visual-motor speed, in particular when using a writing utensil.
- The quality of written expression is often compromised by problems with perspective taking.
- A longitudinal study of individuals with autism indicates that growth rates in calculation skills were significantly slower for students with autism compared to those with learning difficulties. The general mathematical profile of individuals with autism is limited in generalisability as studies focused on one subset of the autism spectrum.

#### *Academic Interventions for Students with ASD*

A summary of instructional strategies is presented in Table 1 to provide educators and researchers with an overview of the type of research conducted with secondary school students with autism in general education classrooms. In setting the scene for successful participation we need to take cognisance of:

- Schedules and clear expectations improve students' ability to appropriately participate and respond to classroom demands.
  - Establishing routines and creating written schedules will support executive functioning difficulties that may impede students' ability to plan and organise.
  - The use of priming – exposing school assignments to students before their presentation in class – has been found to be particularly effective in helping students with autism anticipate what is expected of them and better prepare them to participate in classroom activities and assignments.
-

- Individuals with autism require explicit instructions to learn new skills; instructions should include clear explanations of the skill or task sequence, modelling, guided practice, and multiple opportunities to independently practice and apply the learned knowledge.
- The use of technology such as video modelling procedures which capitalise on visual processing strengths associated with autism, and enlisting support from trusted peers are successfully being used to complement teacher-led instruction in classrooms.
- One method for improving students' ability to generalise learned skills is to provide them with ample opportunities to practice skills across settings by integrating instruction throughout the school day.
- Develop strong home-school collaborations through various means such as email correspondence, periodic team meetings, home visits or communication notebooks.
- Thoughtful educational planning that includes generalisation and independence targets will ensure that the skills that are being taught are functional for individuals with autism.





**Table 1. Instructional Strategies for Teaching Content to Students with Autism in General Education Settings.**

INSTRUCTIONAL STRATEGY	DESCRIPTION	RATIONALE FOR USING THE STRATEGY (LINK TO COGNITIVE PROFILE)	EXAMPLE FROM LITERATURE
<b>Priming</b>	Teacher, parent or peer familiarises the student with academic material prior to its use by providing a short (10-15min) overview. Priming can also consist of introducing a task by listing steps or providing a description of the activity.	Priming can reduce students' stress and anxiety by adding predictability to new or difficult academic tasks (supports EF deficits related to organisation and planning).	Koegal, Koegal, Frea, and Green-Hopkins (2003). Exposing school assignments before their presentation in class resulted in improved accuracy of responding and decrease in disruptive behaviours in writing class.
<b>Peer Support</b>	Typically developing peers are taught specific strategies to interact and support the engagement of their classmates with autism during teacher-directed and learner-initiated activities.	Peer support interventions reduce the students' reliance on adult support and provide opportunities for students with autism to interact with peers.	Carter, Cushing, Clark, and Kennedy (2005): Pairing a high school student with autism with two typically developing peers during English class resulted in higher levels of consistency and contact with the general education curriculum and increased percentage of time spent socially interacting with peers.
<b>Video Modelling</b>	A form of teaching in which the learner watches videotaped examples of an individual demonstrating a target skill. Types of video modelling include basic video modelling, video self-modelling and point-of-view modelling.	Individuals with autism have difficulty learning solely by observing others in the natural environment (supports visual processing and observational learning).	Delano (2007): SRSD instruction delivered via computer-based video self-modelling resulted in gains in the number of words written and number of functional essay elements in persuasive writing.

INSTRUCTIONAL STRATEGY	DESCRIPTION	RATIONALE FOR USING THE STRATEGY (LINK TO COGNITIVE PROFILE)	EXAMPLE FROM LITERATURE
<b>Explicit Strategy Instruction</b>	Students are explicitly taught specific strategies that can be used if they encounter difficulties completing academic tasks such as writing or math problems. These strategies involve both students' thinking (metacognitive) as well as their actions (cognitive). Students are taught memorable routines to follow during specific tasks. Students are often taught to use a mnemonic to remember the steps of the routine.	The routine capitalises on visual strengths and strong rote memory (supports everyday memory deficits).	Whitby (2012): Cognitive and metacognitive strategies were taught to students using the Solve It! Problem-Solving curriculum resulting in an improved percentage of correct responses on math word problems. Asaro-Saddler and Bak (2013): The SRSD approach was effective in increasing the number of essay elements and overall quality of persuasive writing.
<b>Self-Management</b>	Students are taught to monitor their own behaviour or performance and deliver self-reinforcement at established intervals.	The expectation and the steps to accomplish the task are explicitly stated. Reduce the need for the teachers to provide performance feedback (supports EF deficits related to self-management).	Myles, Ferguson and Hagiwara (2007): Student was successfully taught to record his homework assignments.
<b>Graphic Organiser</b>	Visual chart that is used to organise a student's knowledge or ideas. Examples of graphic organisers include Venn diagrams, KWL charts, flowcharts, and story boards.	Individuals with ASD tend to be "bottom-up" thinkers and focus on details. This strategy supports comprehension by helping the learner connect details across the text in a meaningful way (supports central coherence deficits).	Carnahan and Williamson (2013): Students use key words that signal a pattern and a Venn diagram to support their comprehension of expository science text.

*Note. SRSD = self-regulated strategy development; EF = executive functions; KWL = Know, What, Learn.*

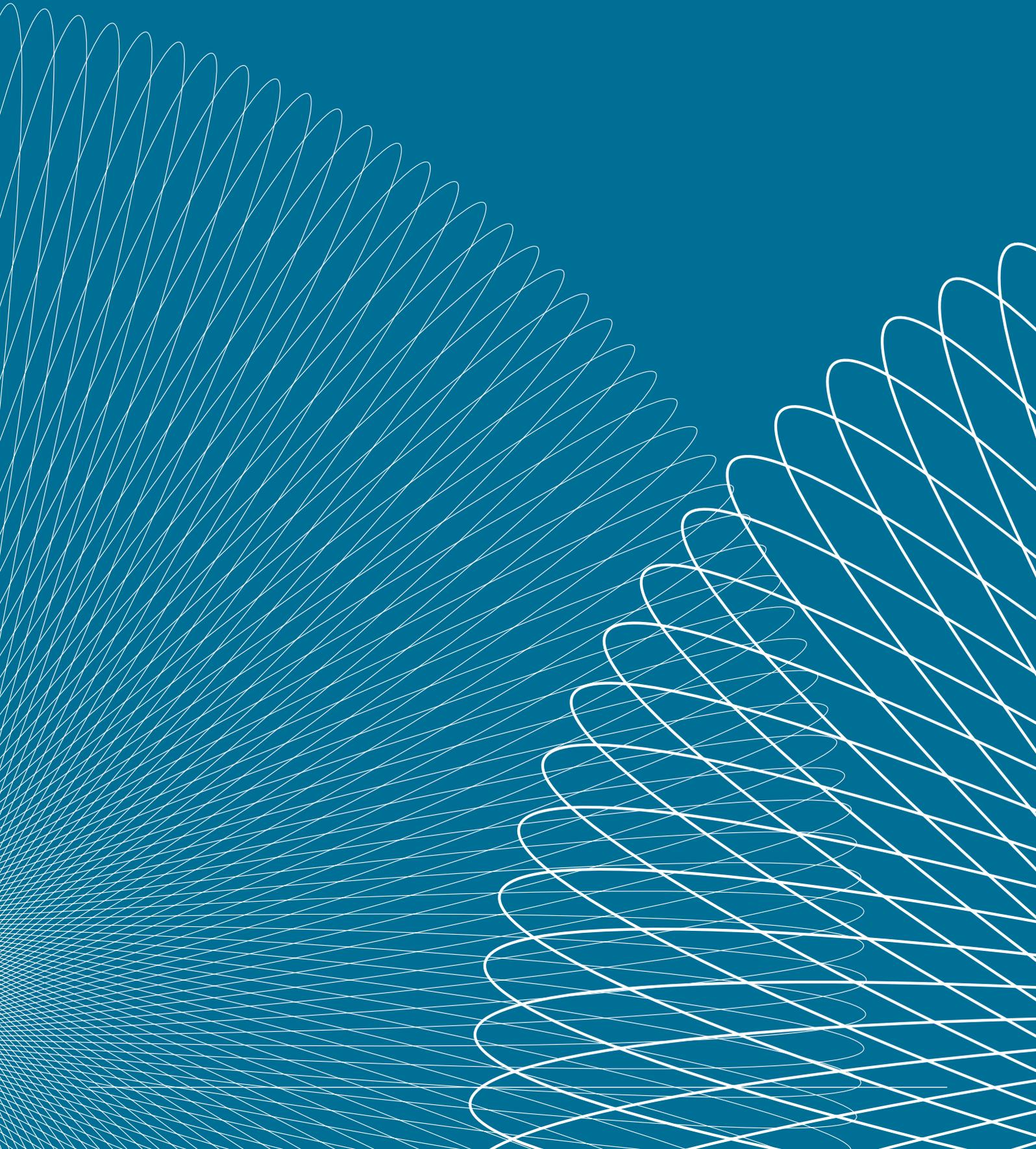
## IMPLICATIONS FOR PRACTICE

(by the authors)

- Educators will need to not only be able to align educational programming with content grade-level standards but also be skilled at adapting their instruction to meet the unique needs of individuals with autism.
- There is an urgent need for the development of academic interventions that simultaneously target the specific learning needs of individuals with autism and are appropriate for the secondary school context.
- The challenge for researchers will be to develop strategies that build upon cognitive strengths (i.e. visual processing) and address areas of weakness (i.e. WCC, executive functioning).
- There is a strong link between social and academic skills; it is important that researchers consider developing interventions that simultaneously address students' social needs (e.g. conversation skills) and academic needs.
- It is important that general education teachers are able to collaborate with specialists and carry out educational plans, as it is deemed appropriate.
- Although teacher knowledge about how to effectively instruct individuals with autism has grown over recent years, much more work needs to be done, particularly around adolescence and the transition to adulthood.

## Full Reference

Fleury, V.P., Hedges, S., Hume, K., Browder, D.M., Thompson, J.L., Fallin, K., El Zein, F., Klein-Reutebuch, C., and Vaughn, S. (2014). Addressing the Academic Needs of Adolescents with Autism Spectrum Disorder in Secondary Education. *Remedial and Special Education*, 35(2), p. 68-79. doi:1177/0741932513518823



# INCLUSIVE/EXCLUSIVE? CONTRADICTIONARY PERSPECTIVES ON AUTISM AND INCLUSION: THE CASE FOR AN INTEGRATIVE POSITION

## BACKGROUND

The main theme of this paper is that the effective inclusion of children and young people with autism requires practitioners to question two dominant and contradictory perspectives within the inclusion literature: the rights based perspective (that argues for an end to all educational segregation and calls for the inclusion of all children and young people in mainstream schools) and the needs based perspective (which draws attention to the lack of research evidence in support of mainstreaming and the dangers of exclusion that can arise from it). Clearly underpinning these two very different perspectives are two very different interpretations of what inclusion is and how it should be enacted, though it should be stressed that the principle of inclusion itself is not in dispute within this summary.

## RESEARCH AIM

The aim of this paper is to explore some of the tensions that frequently arise in debates about inclusion and the education of children and young people on the autism spectrum. The specific aim of this paper is therefore to identify oppositional views on labelling and special pedagogies within the two perspectives above and critically explore their implications for teachers supporting learners on the autism spectrum.

## RESEARCH METHOD

In order to provide a discussion on the topic of inclusion/exclusion of children on the autism spectrum within the education system, literature regarding this topic from 1979 to 2009 was reviewed.

## RESEARCH FINDINGS

### *Autism and inclusion: two contradictory perspectives*

There is no single, coherent, inclusion discourse that could be said to dominate the evolution of inclusive practice in schools. This may explain the confusion and inconsistency that characterises much inclusive practice.

Underpinning the two perspectives are two very different interpretations of what inclusion means and how it should be enacted, though the principle of inclusion itself is not in dispute. This summary addresses the practices of medical labelling and special pedagogies.

Within the rights-based perspective, these practices are generally considered exclusionary whilst within the needs-based perspective they are regarded as a means of ensuring inclusion and avoiding exclusion. This is confusing for inclusive practitioners teaching learners on the spectrum.

### *Dilemmas concerning medical labelling*

Perspectives on disability and medical labelling vary across the literature. Broadly speaking rights-based exclusionists argue that categories of disability and the labels used to identify them, like “autism”, are not neutral, objective and universal but social constructions based on a very particular set of taken-for-granted assumptions about “normality”. It is argued that these medical categories reify differences and become associated with specific identities.

In the case of autism, these identities position children and young people as “deficit” or “impaired” which attract negative judgments and lead to deterministic beliefs about ability and potential. It is argued that it can also lead to a “deficit model” in which problems with learning

and behaviour become associated with a child diagnosed with autism i.e. problems solely within the child rather than problems with the learning environment and wider context, leading to low expectations, and confirming a personal tragedy model of disability. These types of beliefs shape interaction and influence outcomes, which are chiefly social and academic exclusion, and the use of “normalising” interventions to “correct disability”.

The use of medical categories for educational purposes within this perspective are therefore rejected on the basis that they pathologise difference and consolidate exclusion of marginalised groups. There is also a strong ethical imperative to avoid words like “autistic” or “autistic individual” to describe individuals as it is considered disrespectful. Reference should be made to the “person with autism”, thus dissociating the condition from personhood or identity. In contrast, writers and researchers working within a needs-based framework argue that the word “autistic” to describe individuals with autism might be defended on the basis that it can “affirm who they are and what kinds of impairments they struggle with’ and can challenge the notion that it has a ‘shameful connotation’ or implies a diminished identity”. Some individuals on the autism spectrum stress they are proud to be autistic.

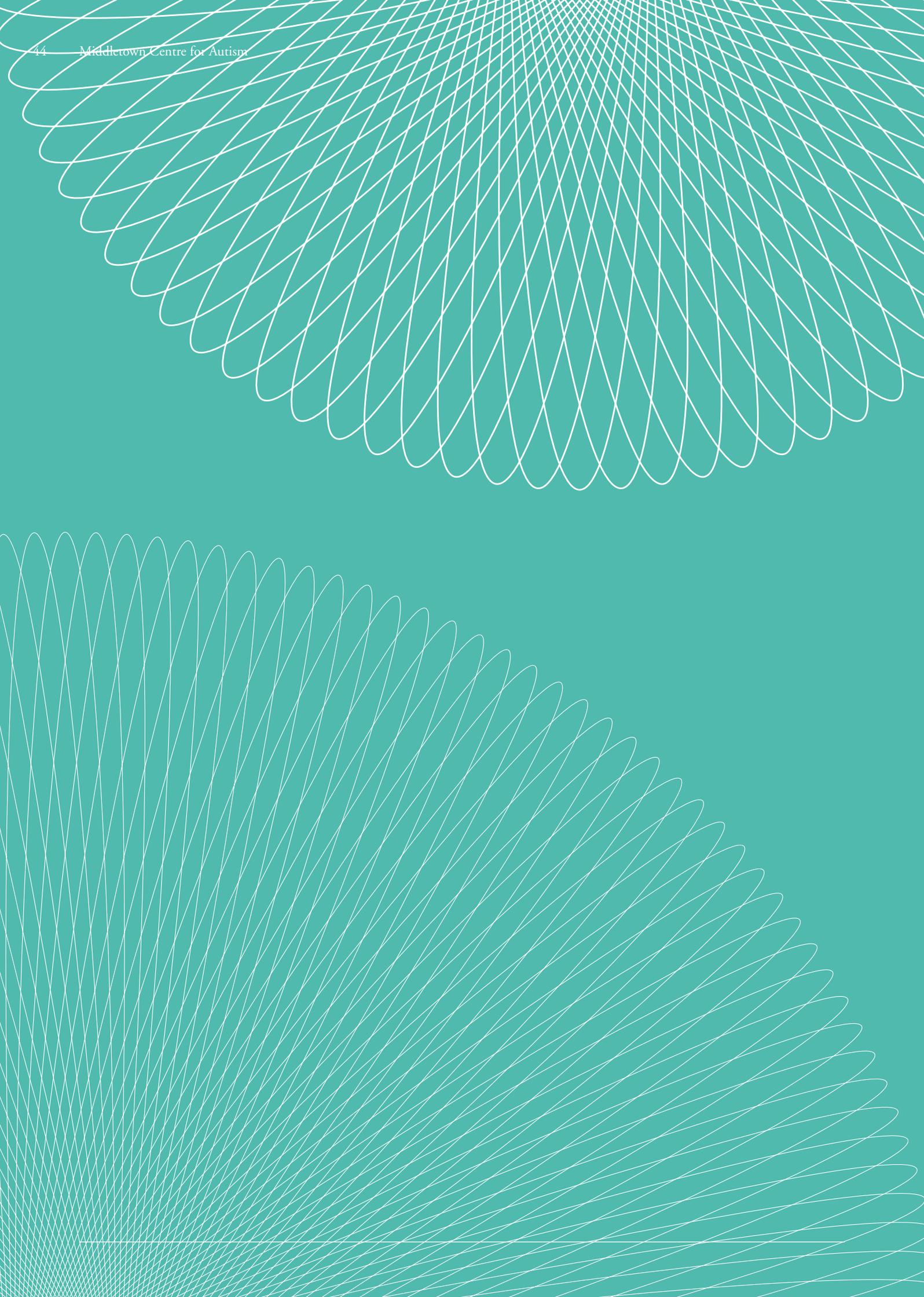
Within this perspective it is proposed that there is much to be gained by a diagnosis of autism, both for the individual experiencing difficulties and for those supporting them, including teachers. It is argued, for example that a diagnosis:

- Enables individuals on the spectrum, their families and teachers to make sense of the condition, learn to cope with, and adapt to it.
- Helps identify the strengths and challenges associated with the condition.

- Triggers practical and financial support from across a range of agencies. Within the educational setting, it allows for access to appropriate assessment procedures and to work in partnership with parents, teachers and other services to identify individual needs and make relevant adaptations to the learning environment.
- Develops holistic and meaningful interventions to meet these needs.
- Triggers legal protection and entitlements under disability legislation.

From one position, labelling is exclusionary because it emphasises difference which can lead to marginalisation. From the other perspective, it is inclusionary as it makes it possible to identify and meet individual needs. It is not difficult to see the paralysing impact this tension might have on teachers.

Within literature the medical model has been increasingly challenged over the past two decades, especially by individuals on the spectrum who have suffered the consequences of negative labelling. The social model of disability has emerged as an antidote to the medical model by foregrounding the role of cultural context in the construction of the disability and by locating the problem or “deficit” within the environment rather than within the individual. Despite this social model also being contested there has been widespread appreciation of the value of a social rather than a medical, interpretation of disability amongst rights-based inclusionists.



### *Dilemmas concerning special pedagogies*

Special pedagogies are defined as forms of instruction “informed by needs that are specific or distinctive to a group that shares common characteristics”. Rights-based inclusionists reject this definition claiming that it positions children and young people with additional support needs as “other” or “special cases” which reinforces construction of difference. Special pedagogies also implies that teachers cannot teach these learners without expertise, which consolidates the notion that these learners need “special” teachers in “special” contexts, enabling mainstream teachers to absolve themselves from the responsibility of teaching them. It is further argued that this reinforces exclusionary practices.

The consensus from the research is what is “special” is not the content of the instruction or the technique, which it argues is the same for all learners, but the way it is delivered or applied to individual learners. This research suggests that “pedagogic strategies are relevant for all irrespective of social background, ethnicity, gender and disability”.

Inclusionists subscribing to this position reject that distinct groups or sub groups of learners require a special pedagogical approach and focus on what is common to all and unique to individual learners. This is referred to as the “unique differences” position.

If this was applied to autism, the logic of the unique differences would be that there is no need to recognise learners on the autism spectrum as a distinct group of learners and no need to recognise learners on the autism spectrum as requiring a special pedagogical approach that is different from or additional to that which is available to other pupils. Furthermore it is argued that the needs of those on the autism spectrum are shared by many

other learners who are not on the spectrum but who present with mild difficulties within one of the areas of the triad of impairments. This logic would therefore support this case against autism specific approaches (referred to as the “many kids” argument).

By contrast, those working within a needs based inclusion model argue strongly that teachers supporting children on the spectrum must have training in autism in order to be able to make sense of the behaviour and responses of the learner, and assess their needs, adapt the teaching and learning environment, and draw on appropriate approaches and interventions to meets the individual’s needs effectively. This is referred to in the literature as the “general differences position” where common individual and group needs are recognised. The literature highlights that within this “general differences” position learners with autism have individual needs like any child and also needs in common with all learners, however they have a range of needs that are unique and specific to those on the autism spectrum, therefore an individual approach informed by understanding of autism spectrum disorders is essential to facilitate inclusion and reduce exclusion.

### *The “many kids” argument*

It has been acknowledged that some learners within the mainstream setting who may not be on the autism spectrum may present with similar behaviours and difficulties with learning. For example, many English learners have problems with common idioms which are frequently a problem for learners on the autism spectrum. It might therefore be argued that this is an issue for many children who are not on the autism spectrum. This is an argument which sits well with the rights based inclusionist model with its concern to avoid labelling and special pedagogies. On the surface, it appears to present a “unique differences” position.

Those working within the needs-based framework would seek to defend the use of special pedagogies by highlighting the crucial distinction between the presenting problem (understanding idioms) and the underlying reason for the problem (linked to an analysis of group needs).

It is argued that English language learners have problems with common idioms because they have a weak grasp of English and do not have sufficient experience of the spoken or written language. As they begin to gain this knowledge and experience and use the language in a variety of contexts, most learners with English as their second language will start to recognise when an idiom has arisen because they will begin to notice it doesn't make sense when translated literally. Once they are taught the common idioms they will begin to recognise them and be able to use them in different contexts with ease. In contrast, most children with English as their first language will pick up common idioms over time as they are immersed in a variety of social settings and do not have much direct formal teaching. This however is not generally true for children on the autism spectrum even if they have a wide vocabulary and can display a sophisticated use of language and present as highly articulate. This is because superficial fluency generally masks an atypical underlying grasp of language and communication which is linked to underlying differences in processing style.

One of the key problems for learners on the autism spectrum is that they take language literally. When they encounter a common idiom they take it at face value. This literalness therefore hinders their underlying capacity to grasp a basic metaphorical function of an idiom. In turn the learner on the autism spectrum may not recognise that this literal interpretation is problematic because of their difficulties in flexibility of thought.

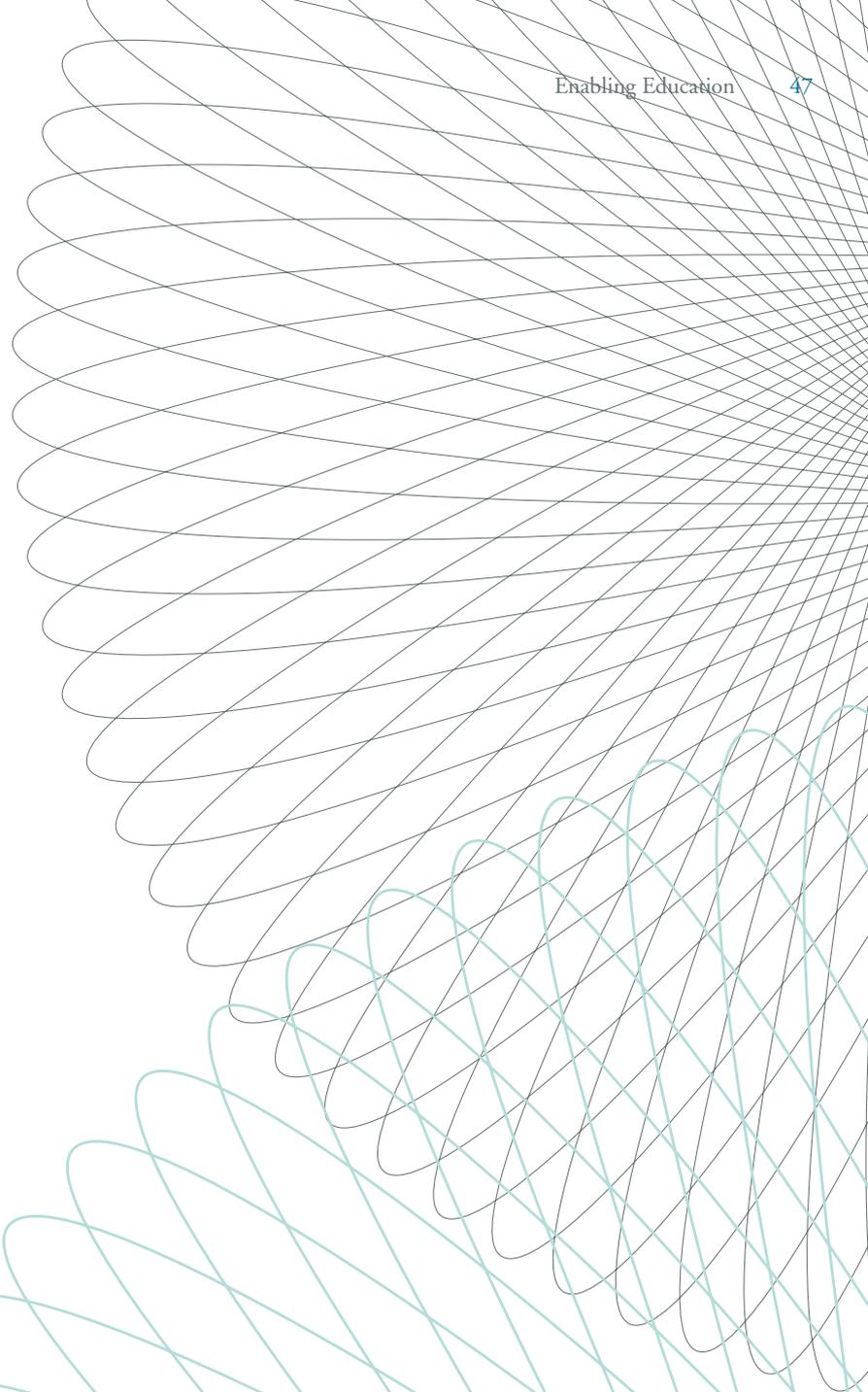
This difficulty often manifests itself as a tendency to attend to details rather than the whole picture, and is associated with the difficulty of switching back and forth from monotropic attention to polytropic attention. Their focus on monotropic attention means that learners on the spectrum frequently fail to pay attention to the overall meaning of text or speech, and may not notice that a literal translation of an idiom does not make sense.

Monotropic attention means the teacher will have to be alert to the parts of the language context that the child is actually paying attention to and this may lead to an unsurprising interpretation.

Furthermore because of the difficulty that children on the autism spectrum experience with social understanding and mind-blindness, they may find it difficult to use non-verbal cues, such as body language and facial expression, to support their interpretation of meaning. This may cause them to become very upset or angry when their peers express surprise or laugh at them for "pulling their socks up". They simply cannot easily decode these situations.

Even when teaching children on the autism spectrum common idioms to support their understanding and development, the process may be undermined by:

- Lengthy teacher explanations.
- An over-reliance on words that can overwhelm and upset the child.



A visual approach is therefore more successful with these learners.

- This visual approach is especially beneficial in the early years, and those on the autism spectrum depend on it to lower the processing burden and to assess communication.
- It must therefore be embedded in teaching and learning rather than being used sporadically, as a learning style option.

Teaching idioms to children on the spectrum requires a heightened sensitivity to their very different conceptual style and underlying constellation of difficulties. It is important therefore that teachers have an understanding of children with autism and the unique way in which they think.

Research has recognised that many teachers do not have this understanding and are likely to see the English language learner and the child with autism as having the same sort of difficulty. This tendency is exacerbated by the fact that autism is a “hidden condition”. Also, because those on the autism spectrum tend to “look” like others, it can be easily assumed that they think and process like others and have the same underlying category of problem. Those with autism have a unique and distinct way of thinking, communicating and interacting which is distinct from those with mild expressions of the triad of impairments.

Teachers who do not understand the diagnosis of autism, or appreciate its import, will find it difficult to anticipate, recognise, understand and address the degree of distortion of development they are presented with. Through good practice, a teacher will be able to address some of the more obvious levels of problems. Without good knowledge and understanding a teacher may make the mistake of seeing the surface behaviours of the child on the

spectrum in isolation and will fail to fine tune the interventions required.

Some inclusionists will argue that special autism pedagogies are not distinct and result in deterministic thinking and exclusionary practices (the rights-based argument). The logic of this position might therefore be argued to be likely to lead to an over-reliance on generalistic teacher practices resulting in a rather narrow and fixed, “neurotypical” view of teaching and learning that is itself, potentially, deterministic and exclusionary (the needs-based argument). It is therefore possible to turn the “many kids” argument on its head. In particular, dropping the association between autism and the strategies associated with good autism practice, and submitting them into a range of “common to all” inclusive strategies, could it is argued return children on the spectrum to a plight they are only just beginning to emerge from; a school context where teachers have little appreciation of the implications of a diagnosis of autism and the pivotal role of the autism lens in the teaching and learning process.

The argument above presents a strong challenge that autism approaches are common to all and not different from or additional to general pedagogies, by highlighting the need for teachers to have an understanding and knowledge of autism and its prevailing behaviours. It is precisely this appearance of commonality that seduces teachers and may lead to exclusion.

Without a knowledge and understanding teachers may not become aware of the subtle ways in which their practice may be directly limiting and determining teaching and learning. For instance, in the example of the ESL learner and a learner on the autism spectrum who are both experiencing difficulties with common idioms, the teacher might decide that both will benefit from explicit,

structured teaching using low verbalisation and a highly visual approach. This might address the needs of the ESL learner but would not be adequate to meet the needs of the learner on the autism spectrum. Firstly the teacher would need to:

1. Anticipate how the pedagogy might need to be refined.
2. Be aware that the learning content could have a very different meaning for the learner and that learning outcomes could be very different to those intended.
3. An analysis of the child's responses would have to be finely tuned by a knowledge of autism to enable the teacher to anticipate how factors such as mind blindness, context sensitivity, monotropic attention etc, might interact and impact on the child's construction of meaning.
4. Such considerations will be superfluous in the case of the ESL learner as they are autism specific, hence "different" and "additional" to.

The literature highlights that when teachers are not trained in the use of the autism lens, many learners will fail to meet their potential and will experience isolation, frustration, crisis and exclusion. The teachers will be thrown into confusion and stress.

An integrative approach therefore holds potential, whereby the two dominant perspectives can work together, rather than in opposition, so that the possibilities for the inclusion of children and young people on the autism spectrum are multiple rather than binary.

## IMPLICATIONS FOR PRACTICE

(by the authors)

The authors acknowledge that teachers cannot make inclusion work in isolation.

- Inclusion in schools belongs to teachers, parents, children and young people on the autism spectrum and support agencies working together in participation and dialogue.
- There may be many arguments for diagnosis and labelling, some against, some for special education, some for a common inclusion pedagogy, some for mainstream inclusion, some for autism specific provision. The challenge therefore for teachers is to listen, engage and negotiate multiple meanings to find a form of inclusion that can both meet the learner's needs and maximise inclusion.
- Collaborative negotiation, flexibility and creativity, informed by an understanding of autism, will therefore be vital.

### Full Reference

Ravet, R., (2011). Inclusive/Exclusive? Contradictory Perspectives on Autism and Inclusion: The Case for an Integrative Position. *International Journal of Inclusive Education*, 15(6), p.667-682.  
doi:10.1080/13603110903294347



# DEVELOPING INCLUSIVE PRACTICE: TEACHER PERCEPTIONS OF OPPORTUNITIES AND CONSTRAINTS IN THE REPUBLIC OF IRELAND

## BACKGROUND

In previous years, special and mainstream education systems ran in parallel in Ireland, however, there has been a policy shift towards providing an inclusive educational environment. This has been borne from international research and recommendations including UNESCO, where inclusion is seen as enabling the provision of equality, whilst preventing marginalisation and discrimination, and from parental litigation, where it was felt that when schools have the appropriate resources, children can be successfully educated together.

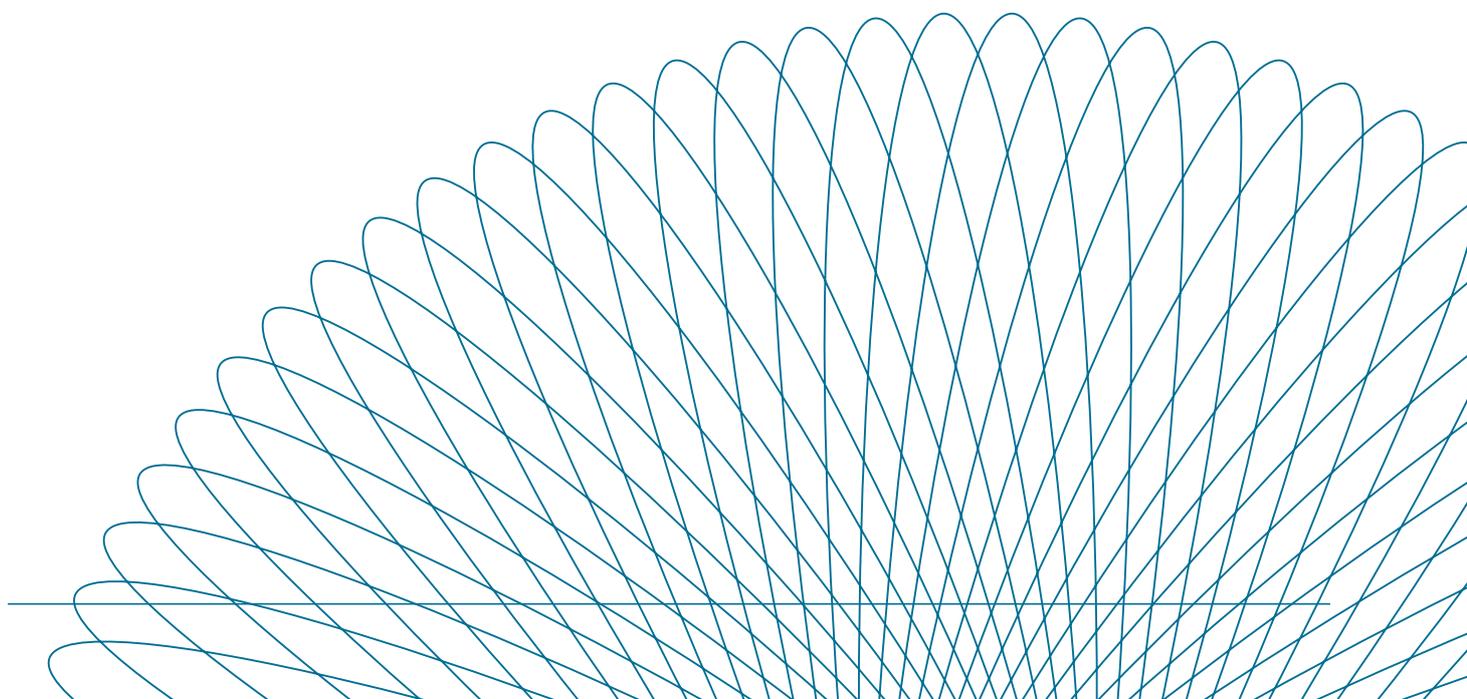
## RESEARCH AIM

This study aimed to gather information on teachers' attitudes regarding inclusion, as well as attaining the perceived constraints in forging such an environment, with the premise that to enable inclusion within a classroom environment, researchers would need to be aware of teachers' knowledge, skills, understanding, capacity and attitudes.

## RESEARCH METHOD

The study was developed using an opportunistic sampling approach culminating in engaging and using 24 semi-structured interviews from seven schools, four from the primary sector and three from the secondary sector, representing urban, semi-urban, provincial and rural backgrounds. The structure in the interviews focused on:

- Teacher understanding of inclusion.
- Whole-school policies and approaches in relation to inclusion.
- Examining current inclusive and exclusive practice within school.
- Teacher belief systems around inclusion.
- Existing teacher skills and confidence.
- Established support systems within the school.
- Pupil curricular access and learning outcomes.



## RESEARCH FINDINGS

Schools, and therefore, teachers, have been hampered in their endeavours to provide the inclusive environment and practice they are in favour of due to a variety and diversity of reasons with two clear themes emerging from the interviews, yet both could be subdivided.

1. Perceptions about inclusion.
  - Meaning of inclusion.
  - Enabling inclusion.
  - School ethos.
  - Concerns about inclusion.
2. Constraints to inclusion.
  - Inadequacies in training.
  - Time.
  - Funding for resources.
  - External supports.
  - Increased behavioural challenges.
  - Teacher resistance.
  - Falling standards in literacy and numeracy.

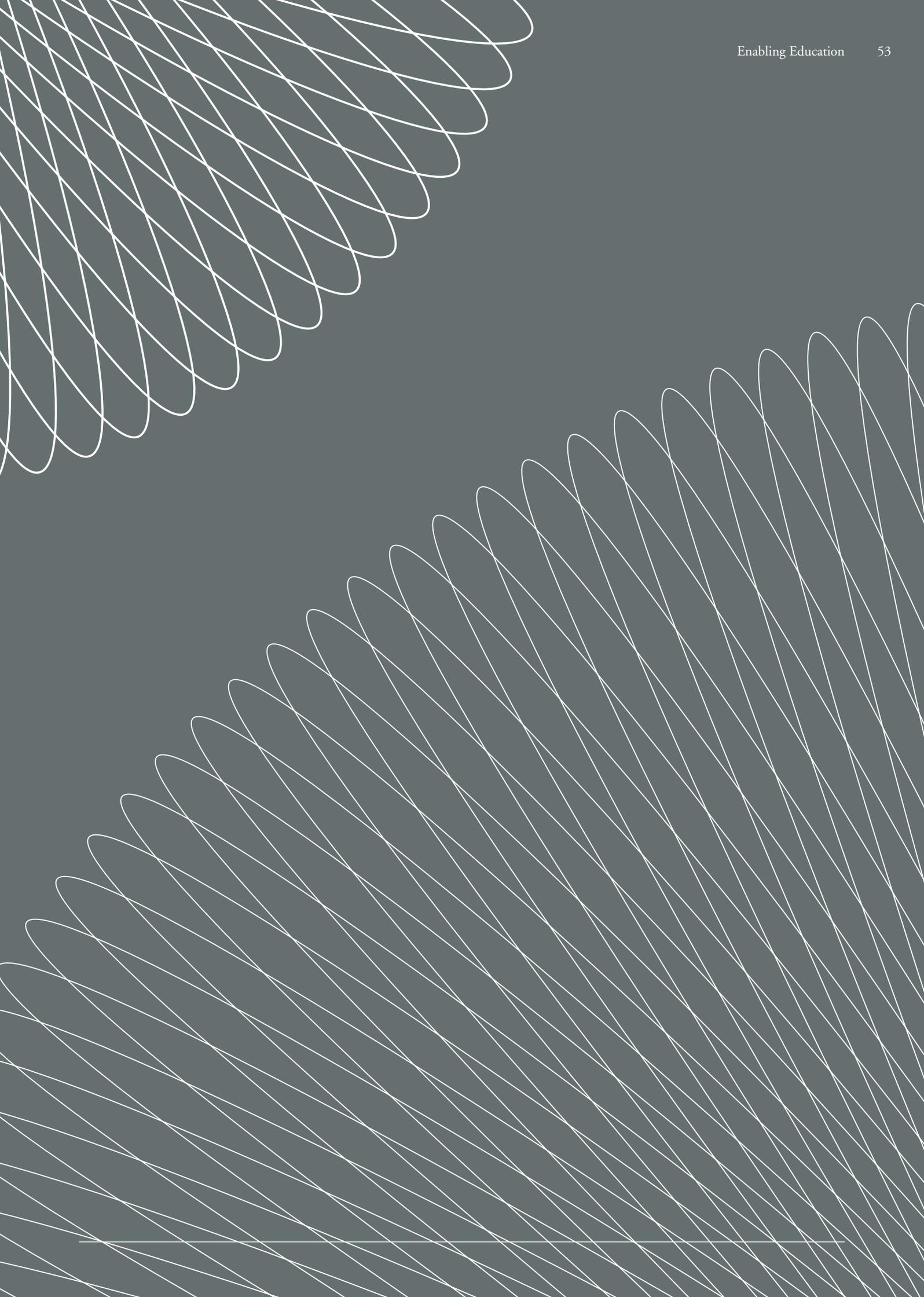
## IMPLICATIONS FOR PRACTICE

There is clear evidence, from this research, that teachers recognise the challenge of responding appropriately to diversity within schools, where they feel the prevalence of special educational needs has risen in recent years, and are generally positive towards and supportive of the principle of inclusion. Teachers appreciated that the above mentioned findings were basic requirements and must be addressed to ensure the development of inclusive teaching and learning environments.

- A shared understanding of what inclusion entails must be developed, where working with children with a variety of needs acts as enabling the teacher, accruing better resources within the school and the employment of a range of teaching and learning strategies.
- Focus must be given to the positive outcomes for the full school community ranging from assessing and matching learning styles to teaching styles to “breaking the cycle of failure” many students experience when their needs go unmet and their skills unrecognised.
- However, support must be offered should teachers and school staff feel that they do not have the requisite skills.
- Individuality of each child must be the whole school tenet, where the suitability of the school to meet the needs of the child is also examined, asking the question, does the school have the necessary expertise and resources to meet the range of needs and thus provide and develop inclusive learning environments?
- Initial and ongoing training for staff with greater access to professional bodies, both for themselves and the students, thus establishing effective inter-agency, collaborative practice, would allow for greater confidence and may allay many of the fears experienced by teachers, which may manifest as resistance.
- Parents and professionals working together; this mutually respected relationship allows the opportunities for inclusive practice to be enhanced.

### Full Reference

Shevlin, M., Winter, E. and Flynn, P. (2013). Developing Inclusive Practice: Teacher Perceptions of Opportunities and Constraints in the Republic of Ireland. *International Journal of Inclusive Education*, 17(10) p. 1119-1133. doi:10.1080/13603116-2012-742143



# INCLUSIVE EDUCATION FOR PUPILS WITH AUTISTIC SPECTRUM DISORDER IN SECONDARY MAINSTREAM SCHOOLS: TEACHER ATTITUDES, EXPERIENCE AND KNOWLEDGE

## RESEARCH AIMS

Increasing numbers of pupils with special educational needs, including children with autism, are being included in mainstream schools. However, pupils with autism are considered the most difficult group of learners to successfully include in such settings. Therefore, the aim of the study was to examine the attitudes, experience and knowledge of school staff in relation to educating pupils with autism in secondary mainstream schools. The purpose of which was to provide both theoretical and practical knowledge about inclusive education for pupils with autism.

## RESEARCH METHODS

Fifty-three participants (21 male and 32 female) from 11 mainstream schools across the North West of England completed a questionnaire. Eleven participants were senior managers, ten were by Special Educational Needs Co-ordinators (SENCOs), and 32 were English, maths or science teachers. Teachers were selected by the SENCO. The questionnaire contained 58 items measuring socio-demographic information, teaching experience, experience and knowledge of autism, the perceived ability to cope with behaviours associated with autism, and the perceived benefits and problems with including pupils with autism. Questions included both open and closed format, generating quantitative and qualitative data.

## RESEARCH FINDINGS

SENCO and Senior Management (SM) responses were combined and compared with the teacher (ST) responses.

### *Quantitative Data*

#### **Social inclusion**

The mean school inclusion score was 86.1, indicating a high level of inclusion. The SM group was 88.9, while the ST group was 84.3. The difference was not statistically significant.

#### **Experience and knowledge of autism**

Fifty participants had experience of teaching a child with autism, while three did not. There was no overall difference in the autism teaching experience of the SM group and ST group.

Thirty eight participants (90.5% of SM, and 61.3% of ST) felt they had the skills to teach children with autism, while 14 did not. The difference was statistically significant indicating that the SM group were more likely to feel they had the skills necessary to teach a child with autism than the ST group.

86.8% of respondents felt they would be likely or very likely to attend training if it was available. There were no significant differences between the SM and ST groups.

#### **Ability to cope with behaviour associated with autism**

The SM group scored a mean score of 20.1, while the ST group had an average score of 23.7. This was statistically significant, indicating that the SM group found it easier to cope with the behaviours associated with autism, than the ST group. Across the two groups “displaying inappropriate emotions” was the most challenging behaviour, while “need for routine” was reported as the easiest. Overall the SM group found four of the behaviours (rigid/literal thinking, lack of social understanding, lack of eye contact, and poor turn taking skills) easier than the ST group.

### *Qualitative Data*

Participants were asked to list the benefits and problems a pupil with autism may experience by being included in a mainstream school.

The most common benefit reported was social inclusion, including social skill development, and learning how to interact with peers.

Other common responses included learning coping strategies and having access to a greater number of subjects. In contrast when participants were asked to list difficulties that a child with autism may experience in a mainstream school, respondents also reported social inclusion. This included bullying, isolation and difficulties making friends. Lack of understanding from peers and staff, and increased stress were also reported.

Participants were finally asked what benefits and problems pupils without autism may experience when a child with autism is included in mainstream schools. Respondents felt a key benefit was increased awareness and tolerance of those who are different, an increased understanding of autism and a greater ability to help others develop social skills. Alternatively, problems cited were difficulty accepting that a pupil with autism may be treated differently, pupils may feel uncomfortable if they witnessed inappropriate behaviour, learning may be disrupted and they may receive less attention from the teacher.

### IMPLICATIONS FOR PRACTICE

Teachers reported lower levels of self-efficacy with regard to including children with autism than SENCOs or senior managers. This highlights the necessity of teacher training to improve the confidence and skill level of teachers when including pupils with autism.

The behaviours which educators found most difficult to cope with were inappropriate emotion displays, heightened anxiety and poor turn taking skills. Therefore, specific training in these areas may be advantageous.

The majority of participants felt they were able to cope with behaviours associated with autism, which is in contrast to earlier findings in this area. This may be due to increased knowledge about autism amongst teachers, or may be due to the fact that nearly all participants had direct experience of teaching at least one pupil with autism.

#### Full Reference

Humphrey, N. and Symes, W. (2011). Inclusive Education for Pupils with Autistic Spectrum Disorder in Secondary Mainstream Schools: Teacher Attitudes, Experience and Knowledge. *International Journal of Inclusive Education*, 17(1), p. 32-46. doi:10.1080/13603116-2011-580462

## CONCLUSION

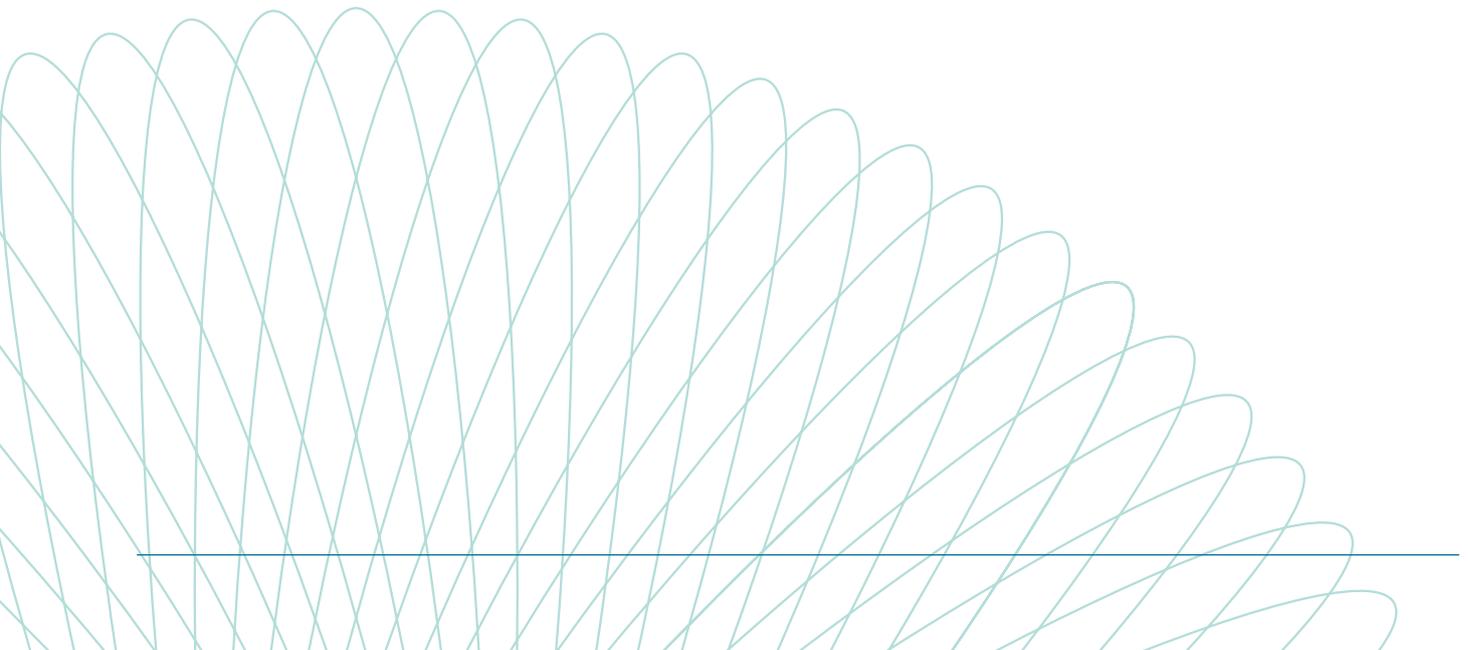
This Bulletin summarises a range of perspectives on the issue of enabling education, however, they have commonalities that are shared across perspectives. In order to enable education the practitioner should work across a child or young person's abilities e.g. his or her academic, social and communication skills and also take into consideration his or her interests and preferences. The focus is on creating an “enabling environment” and this can involve working across home and school and involving the child's parents and other professionals who may be involved in supporting the child and his or her family. The articles summarised provide a wealth of strategies that can support the development of an enabling environment.

The role of research in the provision of an enabling environment is also key. Researchers should acknowledge the role of schools and school staff in the process of educational research. Collaboration with educational practitioners can increase the integrity of any newly recommended approach; ensure that researchers do not make unrealistic demands from schools and finally enable researchers to be mindful of the need to individualise, differentiate and be aware of the potential resource and physical constraints.

Working together, researchers and educational professionals can engage in a dynamic process of practice, evaluation and reflection. This is needed as the provision of an enabling environment is an ongoing task throughout the school life of the child or young person and supportive strategies will change as the child matures and also as the child's engagement with the school increases. The research summarised in this Bulletin demonstrates the need for collaboration and engagement across service providers, parents and the research community in order to develop and maintain an enabling environment within schools.

Middletown Centre for Autism welcomes your feedback and suggestions on its Research Bulletin Series. Please email [research@middletownautism.com](mailto:research@middletownautism.com) with comments or suggestions.

The full series of Bulletins is available to download, free of charge, from the Centre's website. [www.middletownautism.com](http://www.middletownautism.com).



## YOUR OPINION

The Centre trusts that you have found this Research Bulletin informative. It would be appreciated if you would take a few minutes to provide the Centre with feedback in relation to this bulletin by clicking on the survey link below.

**Survey for Enabling Education**



ENABLING EDUCATION



CENTRE FOR AUTISM

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