



CENTRE FOR AUTISM  
MIDDLETOWN

## INCLUSION



## RESEARCH BULLETIN ISSUE NO. 10

Supporting the promotion of excellence throughout Northern Ireland and Ireland in the education of children and young people with autism.





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## INCLUSION

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**This is the tenth 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 contains ten articles related to inclusion for children with autism that have been summarised by the Middletown team.**

**The Bulletin commences with an interview with Gareth D Morewood.**

Gareth D Morewood is Director of Curriculum Support (SENCo) and Specialist Leader of Education at Priestnall School, Stockport. Gareth is also an Honorary Research Fellow at the University of Manchester. He contributes significantly at school, local and national level with regard to inclusive policy and practical solutions, and has written extensively on many elements of provision and support. More information can be found on his website – [www.gdmorewood.com](http://www.gdmorewood.com). Gareth will be providing a five-day course on promoting emotional regulation through inclusion in May-June 2014 at Middletown Centre for Autism.

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.



# AN INTERVIEW WITH GARETH MOREWOOD

## 1. What values underpin an inclusive school?

For me an inclusive school is a straightforward concept. It is underpinned by the core values that allow any student, whatever their background, starting point or differences, to be educated with their peers at their local school and to have the same opportunities as their peers. Maintaining a focus on the whole-child outcomes as well as academic attainment is essential, and can still be achieved (Morewood, 2012).

Within my professional context, as Special Educational Needs Co-ordinator (SENCo), I have developed further my philosophy on inclusion and rights of the child. Building upon the Salamanca Statement it is worth considering the principles of inclusive education:

- A person's worth is independent of their abilities or achievements.
- Every human being is able to feel and think.
- Every human being has a right to communicate and be heard.
- All human beings need each other.
- Real education can only happen in the context of real relationships.
- All people need support and friendship from people of their own age.
- Progress for all learners is achieved by building on things people can do rather than what they can't.
- Diversity brings strength to all living systems.
- Collaboration is more important than competition.

This supports my ideas, outlined initially, around the personalisation of learning for ALL students and links into the whole-school approach evolved at Priestnall School. The modern SENCo must consider individual needs amongst a wealth of data and legislation. Balancing this is not an easy task, but one that is a key foundation of the 21st-century SENCo role: every teacher has a duty (and I use the term advisedly and intentionally) to work together actively in identifying and removing potential (and existing) barriers to the participation, engagement and achievement of ALL young people in their establishments (Ekins and Grimes, 2009). This should be seen as a wider, whole-school improvement approach, as supported by Ekins and Grimes, but also by the strength of my own successful practice in recent years.

## 2. How do you view the role of the SENCo in the modern school?

The role of the SENCo has evolved considerably since its inception in 1994. The modern SENCo has to be able to advocate for a wide range of stakeholders, and to be effective this has to (in my view) come from a core philosophy (see question 1).

The Code of Practice (1994) assumed a 'whole-school' approach to the wide-ranging responsibilities for provision to meet the needs we have described above of students identified as having special educational needs (SEN). Dyson and Gains (1995) suggested that the SENCo role in carrying out these responsibilities is "difficult, if not impossible".

Almost two decades ago, Derrington (1997) noted three interpretations of the SENCo role:

1. The SENCo retained a substantial teaching load, completing substantial amounts of their SENCo tasks outside of school hours.
2. The SENCo had a reduced teaching commitment and took on sole responsibility for administering the Code of Practice (also Cowne, 2003).
3. The SENCo maintained a substantial teaching load but shared the duties as described in the Code with colleagues.

Many may argue that nothing has changed over the time elapsed; however, the recent National Award (NASENCO) and an increased focus on the whole-school approach in the Draft Code (2013) do ensure that the SENCo is seen more centrally to whole-school outcomes. Interestingly, the initial key outcomes of the NASENCO award appear quite formulaic and process driven, by comparison:

- Contributing to strategic development of SEN provision
- Overseeing the operation of the school's SEN policy
- Coordinating provision for pupils with SEN
- Liaising with and advising other teachers
- Managing teaching assistants
- Overseeing the keeping of records for pupils with SEN
- Liaising with parents and carers
- Contributing to the professional development of staff
- Liaising with external agencies.

However, I see a great opportunity for the 21st-century SENCo to really develop the way we work, building on the

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skills I felt important in one of the first pieces I wrote with regard to the core elements of the SENCo skill-set (from Morewood, 2008):

- Advocacy for all (students, parents/carers, professionals...)
- Brokering and commissioning (being 'creative' in provision)
- Solution-focused (keeping 'child-centred' and positive!).

One example of our developing model is having trainee educational psychologists (TEPs) on placement with us whilst undertaking their doctoral qualifications (Morewood & Rumble, 2013). This not only increases time for individual assessments/support/training etc., but also allows for a different perspective for the SENCo. Being able to commission an immediate response is essential for the solution-focused modern SENCo and having TEPs 'on-hand' provides a significant additionality to provision in a 21st-century school.

### 3. What are your three top tips for those working towards an inclusive school?

1. Educate the peer group – it is essential the adults of tomorrow are educated and informed about specific needs and disabilities – especially 'hidden disabilities'.
2. Provide lots of training for staff – make sure everyone in the workplace – teachers, support staff other employees – has access to high quality training and 'understands' 21st-century children as well as the shared aims for the inclusive school.
3. Make sure you challenge discrimination and wilful exclusion by ensuring an inclusive message is high on the agenda every day, every week and for everyone.

### 4. How can staff support each other to improve inclusion?

This is a very hotly debated point, with many very negative pieces in the press recently. However, support staff are vital if used effectively, and having a shared understanding is vital; lots of good work can be quickly 'un-done' without a good understanding of shared aims.

I have been fortunate enough to publish a training pack describing the work we have done at Priestnall in

developing effective classroom partnerships: "Successful Classroom Partnerships: Making the Most of Teaching Assistants" is published by Optimus Education and draws on recent research with regard to effective learning strategies and partnerships.

Teaching Assistants (TAs) and support staff can't make a successful contribution to children's learning if they're not deployed effectively. We need to ensure that teachers are confident in making the best use of support in the classroom and they take an active role in building positive partnerships. As part of this partnership it is important that TAs know what impact they're having on learning; too often poor examples highlight poorly directed support and little feedback. This can be done with a simple record sheet to allow for analysis each week of provision and highlighting successes.

Key elements of successful partnerships between support staff and teachers that the SENCo needs to consider are:

- Supporting teachers in developing fully the range of ways that TAs can provide support in the classroom.
- Encouraging TAs to be confident and proactive in their classroom role.
- Exploring what kinds of support work best for individual learners and promote independence.
- Generating practical ideas for making joint working manageable for all.

Whatever different schools do will depend upon a lot of factors. However, it is essential, whatever your circumstance, that the SENCo helps TAs to demonstrate their impact on student learning and progress. In doing so you empower the student, the TA, and support whole-school aims; this I see as essential in formulating successful partnerships.

### 5. How can a teacher plan for an inclusive classroom?

This is essential – all staff must have as many skills as possible; teachers having a set of 'inclusive skills' is very important. I was part of a Department of Education-funded project – *A Whole School Approach to Access, Participation & Achievement* [www.nasentraining.org.uk](http://www.nasentraining.org.uk) - during 2011/2012. We wrote and delivered training to SENCos across England to support them in delivering training in their own schools to improve the inclusive approaches of their staff. All the materials are free to download and adapt

– SENCOs need to ensure that staff in their schools are as inclusive as possible and the materials provide an excellent starting point.

Whilst many may consider practical elements of the classroom setting initially – access, sensory elements, visual supports, etc. – with an increasing number of young people with complex needs we need to ensure staff are more aware of subtle learning strategies and develop a truly inclusive quality-first teaching model. I think this may be a book in itself; however, I firmly believe that learning & teaching should be central to a school's purpose and the SENCO should support that with 'consultancy' and practical solutions.

## 6. What classroom strategies could a teacher implement to ensure their classroom is inclusive?

This is going to be a big focus in preparation for September 2014, as there is a very clear, explicit view supporting the need for ALL teachers to be inclusive in their approach.

There are many, but the top tips that I consider are as follows:

- Establish and maintain a regulated environment – keep the atmosphere calm and consistent.
- Use a clear structure for learning that reduces uncertainty – keep a consistent structure and ensure all learners understand the aims of each session.
- Consider recent research into effective strategies from the Education Endowment Foundation, particularly with regard to one of the biggest impact strategies – giving effective feedback.
- Allow opportunities for peer tutoring and group support – learners with special educational needs and disability supporting peers is highly effective.
- But above all, create a learning atmosphere that allows for creativity and supports difference.

## 7. What strategies could a reflective practitioner use to assess and review how inclusive their school/classrooms are?

We all need to be accountable – one of the key elements of being a professional, I would suggest. However, individual schools seem to approach this in significantly different ways – some in a very authoritarian hierarchical way, others as a

supporting and structured whole-school approach. It won't take much time to realise that I see the second option as the most effective.

I don't think you can 'measure inclusion' and attempts to do so threaten the tenets of what good inclusive practice is. You can, however, assess, review and develop provision as part of an ongoing cycle of school improvement. A key part of our success is in keeping that improvement cycle child-centred. How many schools 'impose' systems and ways of working without even asking the young people what they think, what they see and hear and how they feel?

An example of listening to students' conversations, what I termed 'ethnographic eavesdropping', was vital in our developing provision for students with autism (Morewood & Drews, 2013). Taking time to listen and observe, indeed to be a truly reflective practitioner, is important. In schools that are not effective at including young people with complex needs, this is often considered less important than short-term gains and published results.

So, to try and answer the question, I'd suggest that the following are key elements to reflective review and improvement:

- Have the young people central to any process.
- Build in a published cycle of improvement, avoid last-minute or rushed activities.
- Allow freedom of thought – try not to constrain the process with hierarchical processes.
- Keep inclusive thinking high on the agenda all the time.

## 8. How important is the role of parents in an inclusive school?

The role of parents/carers is essential, indeed I would argue vital, to a school being 'inclusive'. Parents and carers know their children best; sometimes the SENCO needs to use all of their advocacy skills in order to support and understand specific situations. Many families have hereditary needs and therefore regard to parental support is also an important consideration.

Good schools involve all their stakeholders and partners in everything; in doing so you immediately create and develop a culture of shared aims and joint thinking. Along

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with a colleague at the University of Manchester we have developed a parental confidence measure looking specifically at the views of parents/carers of young people with SEND in different settings (Morewood & Bond, 2012). Part of my work this year is to standardise this measure and develop it further, therefore allowing for a straightforward tool that can support improvement in provision, but most importantly allow for parents/carers to be really part of that wider inclusive approach.

## 9. Is inclusion possible for everyone?

We must aim for this – even if some may feel it is a utopian vision. If we aim for absolute inclusion and end up slightly short we are still including a significant number of our most vulnerable; if we accept a second-best, many amazingly talented young people who could have thrived in local schools and achieved some amazing things may be ‘lost’. My constantly evolving definition currently stands as follows:

- Inclusion is a process, not a ‘state’.
- The aim of this process is to obtain ‘utopia’; even if many argue that it is, ultimately, unobtainable.
- This aim is born from desire and passion for change; not simply working towards pre-agreed, measurable outcomes.
- Inclusion is personal, and therefore, by definition, has to be a personalised process.
- Success cannot be measured against a single instrument.
- Inclusion is never achieved, it cannot be completed, but it can be strived for constantly.

There will always be people who assume something cannot be done; who consider a young person cannot be included. However, I see the modern SENCo role as a vital part of challenging those negative and discriminatory views, and in doing so from a solid base of what your views and ideals are. I will never stop aiming for utopia.

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## Educating Children on the Autism Spectrum: Preconditions for Inclusion and Notions of “Best Autism Practice” in the Early Years

### RESEARCH AIM

This article aimed to uncover the essential elements of “best practice” in educational inclusion for children and young people with autism.

### RESEARCH METHOD

This article draws together findings from expert evidence and empirical studies to identify strategies for enabling inclusive environments.

### RESEARCH FINDINGS

Five areas were outlined as preconditions for inclusion practice:

#### The Context

The researcher highlighted that inclusion goes beyond education and must address the total experience of the child or young person with autism and their family.

#### A Unique Child

All children with autism have impairment in social and emotional understanding, communication, and flexibility of thinking and behaviour. However, each child is unique and will present differently due to differing presenting features, levels of severity, co-morbidities, cognitive abilities and personality attributes. All intervention, therefore, should focus on individual strengths, interests and preferences.

#### Learning and Development

Educational intervention must take into account the nature of autism, and knowledge and understanding of the individual child.

#### Enabling Environments

Research indicates that an enabling environment for children with autism must:

- Base intervention on assessment findings
- Involve parents and carers
- Focus on social understanding and communication
- Adapt physical environments

- Provide structure and visual supports
- Consider sensory processing difficulties
- Adapt language, communication and social interaction style as necessary.

#### Positive Relationships

Parent and teacher collaboration is essential, as is collaboration between all professionals working with the child, to gain an accurate picture of the child’s functioning in all settings.

### IMPLICATIONS FOR PRACTICE

(by the author)

- The researcher highlights that there is a need for clear processes for identifying the child’s needs and strengths.
- Strategies to help children with autism negotiate the social environment and communicate their wants and needs should be provided.
- The researcher highlights four key development areas where support may be necessary:
  - Communication and language: Development of joint attention, imitation and understanding of body language.
  - Social understanding and skills: Explicit direction on emotion recognition and understanding, perspective taking, and conversational skills.
  - Learning with and through peers: This has been effective by beginning with small groups or one-to-one settings with tasks that are rule-governed.
  - Overt teaching of play behaviours: Play skills are likely to be delayed but may benefit from structured and controlled environments to teach play skills.
- The researcher recommends that all individuals working with children with autism should have a good understanding of autism and how it impacts the individual child’s learning needs before choosing intervention models and tools.

### 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.

# RESEARCH PAPER

## Effective Strategies for the Inclusion of Children with Autism in General Education Classrooms

### RESEARCH AIMS

The purpose of this review was to provide a description of strategies used to support pupils with autism in mainstream environments. Additionally, the researchers aimed to identify future areas of research that are needed to facilitate the inclusion of students with autism.

### RESEARCH METHOD

In this literature review the researchers reviewed articles that were concerned with inclusion strategies for children with autism spectrum disorders. Predominantly, this review centred on Harrower and Dunlap's (2001) discussion of effective procedures for supporting children with autism in mainstream classrooms.

### RESEARCH FINDINGS

The researchers identified a number of strategies and these are detailed under different headings below.

### INDIVIDUALISED STRATEGIES

Individualised strategies are those which are directed to meet the individualised needs of each pupil. There are a number of different sub-categories of individualised strategies, which are listed below.

#### **Antecedent Procedures**

Antecedent procedures involve making adaptation to the environments to produce a desired response or reduce undesirable behaviours. They include priming, prompt delivery and visual schedules.

- Priming consists of allowing students to preview information or an activity before the student engages with the activity. Priming may be used before field trips, fire drills or other expected changes such as a substitute teacher. Priming has been found to be associated with increased social interaction with peers and a decrease in challenging behaviour on school trips.

- Prompting or coaching supplements the general instructional routine and can be done through a peer buddy-prompting condition or a teacher-prompting condition. Prompting can be used throughout educational and home settings and has been found to increase peer interactions.
- Visual strategies are used to increase predictability for students with autism. Schedules can be used to visually communicate upcoming events, facilitate transitions between activities and increase independence. Visual schedules have been found to increase on-task and on-schedule responding.

#### **Delayed Contingencies**

Previous research has highlighted that when close supervision of pupils with autism is removed, there can be a reappearance of behaviours and a decrease in appropriate behaviour, despite improvements being made under supervision. It is thought that this may have occurred due to a decrease in contingencies, such as positive reinforcement. Consequently, delayed and unpredictable contingencies have been used to facilitate the generalisation and maintenance of behaviour in the absence of direct supervision. One way this could be done is through the use of an unpredictable schedule of supervision. Using this strategy has been found to increase on-task behaviour and productivity.

#### **Self-Management Strategies**

Self-management strategies promote classroom independence by shifting the responsibility of behaviour management from the teacher to the pupil. Self-management can be done in several ways but may include the use of student selection of goals, students' own self-observation and recording of behaviour, and student administering their own reinforcement. Self-management has been found to have several positive outcomes, including promoting independence and decreasing the need for one-to-one assistance, which provides more opportunities to interact with peers and take part in class activities.

## Effective Strategies for the Inclusion of Children with Autism in General Education Classrooms

### Peer-Mediated Interventions

Peer-mediated interventions emphasise the importance of involving typically developing peers as socially competent facilitators to promote appropriate communicative and social behaviours. Peer-mediated interventions also enable a more natural social context to improve social reciprocity and have been found to increase social learning opportunities. This can be done through peer tutoring, peer modelling, peer reinforcement or class-wide pairing of pupils.

### A Standardised Model for Individualised Interventions

Standardised models for individualised interventions aim to address challenging and disruptive behaviours that can inhibit children with autism being included in mainstream classrooms. There are several standardised models and the researchers discuss the Positive Behaviour Support (PBS) approach in depth. This approach involves functional behaviour assessment and assessment-based interventions. The theoretical foundations of PBS have been used in models such as Prevent-Teach-Reinforce (PTR), which has been adapted for the classroom environment. This collaborative approach provides a process for conducting functional behaviour assessment and uses the results to inform intervention plans. There are five steps involved in PTR:

1. Establishing a team and determining the functions, methods and responsibilities of the team.
2. Setting goals in relation to social, behavioural and academic targets, which are monitored daily through the completion of the Behaviour Rating Scale.
3. Conducting functional behaviour assessment through undertaking direct and indirect observations of antecedent variables (to enable prevention in future cases), function and replacement variables (teaching strategies to avoid disruptive behaviour) and consequence variables (reinforcing positive behaviour). Function-based hypothesis is developed based on information ascertained during assessment.
4. Selecting interventions that are matched to the hypothesis. This phase should also include a plan for

training and coaching adults who are implementing the strategies. Fidelity of the support plan implementation should also take place.

5. Evaluation of the data to ensure it has been effective and to form future plans.

PTR has been found to improve social skills in typically developing children, and behaviour and academic engagement in both typically developing and children with autism.

### Organisational/Systems Change Strategies

Organisational/systems change strategies involve making adaptations to the overall school environment. The school context in which inclusion is considered is itself thought to be as important as specific strategies that are implemented. The researchers discuss two initiatives: response to intervention (RtI) and School Wide-PBS (SW-PBS). It must be noted that while neither initiative is autism-specific, they have been shown to benefit children with disabilities and contain many strategies that have been found to benefit individuals with autism.

- RtI involves redesigning teaching and learning environments and its foundations are based on applied behavioural analysis, curriculum-based measurement and precision teaching. RtI involves five steps: screening of all pupils to identify those at risk, ongoing progress monitoring to identify those who require additional support, implementing evidenced-based strategies in accordance with individual student need, data-based decision-making and problem-solving, and ensuring practices are implemented with accuracy and consistency. RtI focuses on prevention and can be used to prevent the escalation of challenging behaviours.
- SW-PBS is a three-tiered prevention model involving primary interventions (universal system strategies for all students), secondary interventions (for specialised groups, classrooms or students at risk) and tertiary interventions (for students with severe behavioural problems). If some pupils are unresponsive at the

# RESEARCH PAPER

continued from overleaf..

## Effective Strategies for the Inclusion of Children with Autism in General Education Classrooms

universal level then they will receive more intensive intervention through secondary or tertiary support. Strategies involved in this level of support may include increasing expectancy by the placing of furniture and equipment, using visual schedules, providing visual instruction, minimising loud noises, providing social skills groups, or increased behavioural reinforcement.

### IMPLICATIONS FOR PRACTICE

*(by the authors)*

The study highlights that there are many strategies available to assist the inclusion of students with autism in mainstream education classrooms. Combined, these studies provide a valuable resource of intervention options available.

The researchers emphasise that clear leadership is needed to implement the strategies outlined. They propose the **STAR** approach, which is a four-point school-wide model for promoting inclusion. **STAR** stands for:

- **S**et the tone by establishing a culture based on equality, democracy and valuing differences.
- **T**ranslate research into practice by using only effective practices in the classroom.

- **A**rrange for collaboration between professionals.
- **R**eflect on process and outcomes to recognise successes and remedy limitations.

The researchers maintain that inclusion can be achieved even in those with severe autism, if sufficient supports are put in place. However, the strategies outlined have been designed for mainstream settings and the studies reviewed were based on children educated in mainstream settings. This means children with more challenging behaviour or lower intellectual ability may not have been considered. Future research should include a wider variety of children with autism who present with different behavioural and intellectual abilities to increase generalisability of these findings. The strategies used should also be validated through empirical studies in order to ascertain their effectiveness for all children with autism.

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## Inclusion for Toddlers with Autism Spectrum Disorder

### RESEARCH AIMS

The researchers aimed to investigate the effectiveness of a community-based inclusion programme (Children's Toddler School) for toddlers with autism. It was predicted that the intervention would result in improvements in developmental level, adaptive behaviour and communication skills. The researchers also aimed to ascertain which factors investigated were predictors of positive outcomes for toddlers with autism.

### RESEARCH METHOD

One-hundred-and-two children (87 boys, 15 girls) who were diagnosed with autism participated in the Children's Toddler School for a minimum of five months. Children ranged from 21-33 months old, with a mean age of 28 months. Children were screened to ensure they met the non-verbal IQ minimum requirement.

Children and their parents completed several standardised assessments before and after the intervention.

- Developmental levels and intellectual functioning were assessed by a psychologist carrying out a test of developmental function and by the children completing the Bayley Scales of Infant Development (second edition) or the Mullan Scales of Early Learning.
- Adaptive behaviour was assessed through the toddlers completing the Vineland Adaptive Behaviour Scales.
- Autism symptoms were investigated under three areas: severity of symptoms, communication, and behaviour.
  - Severity of symptoms was assessed by the parents completing the Gilliam Autism Rating Scale.
  - Communication skills with regards to receptive and expressive language skills were assessed by the children completing the Preschool Language Scales three or four (depending on year of entry into the programme), and their parents completing the MacArthur-Bates Communicative Development Inventories. This parental assessment involves recording the number of words, phrases and gestures used and understood by the child.

- Behaviour was assessed by the parents completing the Child Behavior Checklist, which is an estimate of emotional and behaviour problems.

In total the programme consisted of 21 hours of intervention, including 15 hours in the classroom setting, four hours of one-to-one intervention and two hours of in-home parent education. Parents also consented to using the strategies at home. Sessions were held in the morning or afternoon and four children with autism attended each session; eight typically developing children were also present. In the classroom a systematic blend of incidental teaching, pivotal response training, structured teaching and interactive/developmental techniques was used. Two augmentative communication systems were also used: the Picture Exchange Communication System and modified sign language for non-verbal children and those requiring visual support.

To investigate which factors were predictive of positive outcomes, statistical analysis through multiple linear regression of pre- and post-intervention assessment scores took place.

### RESEARCH FINDINGS

While there was variability in the outcomes of scores between children, overall the children made significant gains in developmental level, language skills and adaptive behaviour.

#### Developmental Functioning

After intervention there was an increase in the number of children functioning at the "typical" range from 6% to 31%. Additionally, 36 out of 70 children (51%) moved out of the "severe" range of functioning, while 16 out of 70 children (23%) functioning in the "significantly delayed" range at intake were functioning in the "average" range after intervention.

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## Inclusion for Toddlers with Autism Spectrum Disorder

### Adaptive Behaviour

In the Vineland Adaptive Behaviour Scales, children made statistically significant improvements in the overall adaptive behaviour composite, which included communication, daily living skills and socialisation. However, there was no significant change in the motor skills domain.

### Symptoms of Autism

#### Severity of Symptoms

In the Gilliam Autism Rating Scale completed by parents, results indicated that there were no significant decreases in the severity of autism, communication or socialisation from intake to exit. However, it was found that there was a statistically significant decrease in stereotyped behaviour, indicating fewer stereotyped behaviours after intervention.

#### Communication

Parents reported that there was an increase in the number of words and gestures produced and understood after the intervention. This was also confirmed by the Preschool Language Scales. On entry the average scores were in the “significantly delayed” range, and this moved to the “mildly delayed” range at exit.

#### Behaviour

In the Child Behavior Checklist there were no statistically significant changes in pre- and post-intervention scores. However, pre-intervention scores indicated that the majority of children did not present with clinically significant behavioural issues. Nevertheless, there was a reduction in internalising behaviour from 26 children to 22 children, with externalising behaviour remaining the same.

### Predictors of Positive Outcome

With regard to factors that are predictive of positive outcomes, the researchers did not find that early IQ levels were predictive of developmental or behavioural outcomes, but rather adaptive communication and socialisation were predictive of outcomes at age three. Length of time spent in the intervention programme, level of words and gestures used at entry, and higher externalisation and lower internalisation of behaviours were also found to be predictors of positive outcomes.

## IMPLICATIONS FOR PRACTICE

*(by the authors)*

- In line with previous research on early social integration, this research highlights that children with autism benefit from early intervention through social integration. The benefits include increased developmental level, adaptive behaviour and communication levels.
- Although the study did not include a control group who did not receive early intervention to allow for comparison, length of time spent in the intervention programme was correlated with improvements in standardised measures. This suggests that early intervention and inclusion resulted in improved outcome measurement scores rather than maturation alone.
- In this study there was a minimum IQ requirement and most children did not present with clinically significant behavioural issues. Therefore, this study may not be generalisable to all children with autism.
- Many early years settings (including the programme used in this study) are comprised of a combination of different evidence-based strategies, making it difficult to conclude which were most effective and resulted in the improvements shown. Additionally, in this study improvements may also have been due to social inclusion or the home programme. Consequently, future research should focus on each method used in isolation.
- The researchers stress the need for the examination of community intervention programmes to ensure evidence-based practice is being followed.
- The need for more centres where toddlers with autism can be socially integrated with typically developing children at the preschool age is emphasised due to the large numbers of children who are diagnosed with autism before their third birthday.

## FULL REFERENCE

Stahmer, A. C., Akshoomoff, N. and Cunningham, A. B. (2011). Inclusion for Toddlers with Autism Spectrum Disorders: The First Ten Years of a Community Program. *Autism*, 15(5), p. 625-641.

## Inclusion of Preschool Children with Autism in Sweden: Attitudes and Perceived Efficacy of Preschool Teachers

### RESEARCH AIM

This small-scale study from Sweden aimed to examine the relationship amongst preschool teacher characteristics, years of experience, education level, their attitudes towards inclusion, and individual teacher self-efficacy. The law in Sweden advocates full inclusion for all children within preschool education. Teachers come to preschool education from a variety of academic backgrounds, some from special education but the majority from general education.

### RESEARCH METHOD

The researchers administered distinct instruments to 21 female preschool teachers: The Autism Attitude Scale for Teachers and the Bandura Teacher Efficacy Scale, along with a demographic survey encompassing age, gender, years of experience teaching in preschool and years of experience working with children with autism. The researchers pointed out that due to the small number of participants greater research is needed in this area, to act as a support for both teachers and children with autism.

### RESEARCH FINDINGS

Of the 21 participants, almost half (10 teachers), although attempting to fulfil the legal remit of full inclusion, had not received any specialised training as part of their teaching training. Whilst 16 claimed that they had received expert supervision (on average three hours per month) only one felt that this translated into an excellent knowledge of autism. Many of the teachers confidently used some form of intervention, whether it was Applied Behaviour Analysis (ABA), Social Stories, Picture Exchange Communication System (PECS) or generic pedagogy, but felt that they were not afforded significant or sufficient time within the week to provide substantial one-to-one intervention. However, the majority of teachers thought their approved preschool teaching skills would equate to meeting the needs of all of the children, including those with autism, and that children with autism can learn effectively from a good preschool teacher.

### IMPLICATIONS FOR PRACTICE

*(by the authors)*

- As early intervention and preschool programmes have been noted as providing essential learning and skill development for children with autism, teachers need to be prepared to differentiate their programmes to meet specific needs. Therefore, to include or even attempt to include children with autism within a busy diverse preschool classroom, teachers need additional training. This could come in two forms: during initial teacher training, with courses in special education becoming obligatory, and supplemented throughout in-service training.
- Ongoing in-service teacher training is required if children with autism are going to be fully included in the learning environment. Teachers felt that they needed this level of support to ensure their teaching practice and understanding of autism evolved.
- Those with specific training and education in working with children with autism and those with several years of experience felt better placed and able to include the child in a variety of activities.
- Confidence, and thus having a positive attitude towards implementing specific strategies for children with autism, may lead to the provision of greater opportunities for inclusion. Those who perceived themselves as having little or no training and knowledge were reticent about their ability to include or present activities in an accessible manner.
- Many felt that the skills of working in a preschool setting with all children were the same range of skills needed to work with a child with autism, clearly stating that a good preschool teacher can provide for all children, including those with autism.

### FULL REFERENCE

Engstrand, R. Z. and Roll-Pettersson, L. (2012). Inclusion of Preschool Children with Autism in Sweden: Attitudes and Perceived Efficacy of Preschool Teachers. *Journal of Research in Special Educational Needs*, 53(10), p. 1-10.

# RESEARCH PAPER

## Inclusive Provision Options for Pupils on the Autistic Spectrum

### RESEARCH AIM

The researchers aimed to investigate the provisions available in mainstream education for pupils with autism in schools with and without an autism resource base.

### RESEARCH METHOD

Schools with at least one pupil with a statement for autism were invited to take part in the study. Pupils were required to have a Statement of Special Educational Needs as this is necessary to gain access to a resource base. Twenty-six schools took part in the study; seven schools had an autism resource base, while the other 19 did not.

One key member from each school was interviewed individually through a semi-structured interview. All interviews were conducted and transcribed by the third author. Interviews were designed to collect information about:

- Current provision for pupils with autism.
- Desired changes to aid inclusion and steps needed to achieve these changes.
- Training and awareness-raising undertaken by the school for staff, pupils and parents.
- Whole-school modifications made and individual strategies used for pupils with autism.

The transcripts were content analysed by using staged procedures described by Vaughn, Shay-Schumm and Sinagub (1996).

Key staff members were also presented with three scenarios to investigate problem-solving and implementation of strategies in the educational setting.

### RESEARCH FINDINGS

#### Current Provision Overview

Pupils without an autism resource base spent between 75% and 100% of their teaching periods in mainstream classes.

This is in comparison to between 0% and 100% (mean 58.3%) for pupils in schools with an autism base. In schools without a base, 50% had access to a TA (Teaching Assistant) for 25 hours, in comparison to 37% of pupils with an autism base. 78% of pupils with a resource base received speech and language intervention, in comparison to 59% for children without a resource base. In schools with a resource base, 38% received support from a visiting specialist teacher, while 77% of children without a resource base received this support.

#### Training and Awareness

In schools without a resource base, 52.6% of SENCOs (Special Educational Needs Coordinators) had autism-specific training and 42.1% of class teachers had received training. In schools with a base, all SENCOs had received training, as had 86% of class teachers. Forty-three per cent of schools with a resource base and 53% of schools without a resource base ran awareness-raising sessions for pupils. This was an area where schools wanted to do more.

#### Modifications and Strategies

More strategies were used in schools with a resource base than in schools without one. These included individually focused strategies and supplemented communication approaches, such as PECS (Picture Exchange Communication System) and functional behaviour assessment. Resource base staff also placed greater emphasis on analysis of behaviour and antecedents to aid prevention. This in contrast to mainstream classrooms where emphasis was placed on the child verbalising causes of behaviours.

#### Desired Changes

Some colleagues from autism bases expressed a need for changing attitudes of mainstream staff and desired extra support with regards to occupational therapy, speech and language therapy, and social skills training. A third of staff from schools without a base queried the adequacy of the provision provided and expressed a desire for some pupils to obtain a place in an autism base. Issues relating to transfer

## Inclusive Provision Options for Pupils on the Autistic Spectrum

to post-primary settings and the need for more training were also raised in these schools.

### IMPLICATIONS FOR PRACTICE

The greatest differences in the provision provided in schools with and without an autism base relate to inclusion and training. Children with autism who attended schools with a resource base spent less time in the mainstream classroom. Often withdrawal was to facilitate one-to-one instruction or as a result of a behavioural incident. One reason suggested for this was a lack of TA support in the mainstream classroom. The effect of this extra time away from mainstream peers was not discussed. Future research should focus on the effect of withdrawal on social inclusion.

While training of TAs in schools without an autism base was high, training for SENCOs and class teachers was lower. The researchers state that a lack of training about autism in class teachers may result in the responsibility for the education of the pupil being placed on autism-trained Teaching Assistants. The researchers also raise concerns that it may mean teachers do not have the knowledge to provide support and advice to parents.

### FULL REFERENCE

Frederickson, N., Jones, A. P. and Lang, J. (2010). Inclusive Provision Options for Pupils on the Autistic Spectrum. *Journal of Research in Special Educational Needs*, 10(2), 63-73.

## Loneliness, Friendship Quality and the Social Networks of Adolescents with High-Functioning Autism in an Inclusive School Setting

### RESEARCH AIM

The aim of this study was to explore several social constructs, namely loneliness, friendship quality and social network status, in adolescents with autism compared to that of their typically developing (TD) peers. The reason for this is that given the difficulty the adolescent period poses for all individuals, it is particularly important to understand the social relationships of adolescents with autism. Furthermore, understanding what happens during adolescence may inform interventions and/or provide valuable information regarding social outcomes for these children.

### RESEARCH METHOD

Participants for this study were recruited from a mainstream education high school in Los Angeles that had an autism programme. Eligibility for this programme was based on having a clinical diagnosis of autism, conversational speech and minimal behaviour problems. A total of seven adolescents with autism (4 male, 3 female) were recruited along with 13 TD peers. All participants were enrolled in a drama class and with the permission of their parents were asked to complete the Loneliness Scale, Friendship Qualities Scale, Friendship Survey and School Activity Questionnaire.

### RESEARCH FINDINGS

Research findings indicated that adolescents with autism experienced significantly more loneliness than their TD classmates. Indeed, whilst those with autism within this study seemed to show a social desire to forge relationships with their peers, questionnaire responses showed that they tended to view themselves negatively in terms of the qualities that they believed to be essential in a friendship.

This study also found that all seven adolescents with autism identified another adolescent with autism as a best friend. Similarly, 22 out of 24 of their friend nominations (i.e. individuals they perceived to be their friend) were

also other adolescents with autism. The quality of these friendships was found to be significantly poorer with regards to companionship and helpfulness whilst levels of closeness, security and conflict were found to be statistically similar as compared to friendships between TD classmates.

With regard to social network status, the majority of TD classmates had friendships that were embedded within larger, informal peer groups, whilst adolescents with autism were either isolated or on the periphery of their classroom social structure and were not recognised as being part of a friendship group as often as their TD classmates. Indeed, within this particular study it was found that rather than being connected to any TD classmates, six of the seven adolescents with autism were connected to each other, forming two smaller friendship groups on the periphery of the classroom.

### IMPLICATIONS FOR PRACTICE

*(by the authors)*

- This study is important as although research in this area is beginning to increase, relatively little is still known about the nature and quality of relationships formed in older children with autism, particularly those fully included in mainstream education.
- Findings highlight that mere classroom inclusion may be insufficient in order to fully integrate adolescents with autism with their TD peers. Rather, successful integration may be dependent on how adolescents with autism are perceived by their TD classmates. Therefore, more intensive social skills interventions may be needed, such as sensitivity training, in order to allow adolescents with autism to attain true social inclusion.
- The authors also recognise that in future research it would be beneficial to include more participants from other classes as well as examining class relationships across other classes. The effect of age, grade levels and classrooms could also be examined. Furthermore, researchers noted that as adolescents progress through

## Loneliness, Friendship Quality and the Social Networks of Adolescents with High-Functioning Autism in an Inclusive School Setting

secondary school academic demands increase and may add additional social pressures, particularly for those with autism, and so future research could focus on examining these social issues and outcomes over time using longitudinal studies. Such research may provide invaluable information for social skill interventions that could, in turn, help to alleviate feelings of loneliness and enhance friendship quality in adolescents with autism.

### FULL REFERENCE

Locke, J., Ishijima, E. H., Kasari, C. and London, N. (2010). Loneliness, Friendship Quality and the Social Networks of Adolescents with High-Functioning Autism in an Inclusive School Setting. *Journal of Research in Special Educational Needs*, 10, p. 74-81.

## College-Based Inclusion Programming for Transition-Age Students with Autism

### RESEARCH AIM

This study aimed to review current literature related to college-based inclusion programming and support for students with autism in the area of social communication. The primary purpose of conducting such a review was to highlight the need for support in this area and facilitate the development and accessibility of inclusive post-secondary services for students with autism alongside their same-age peers, as outlined in the Individuals with Disabilities Education Improvement Act (IDEIA, 2004), by providing recommendations for enhancing the development of social communication skills, with particular focus on the Campus-Based Inclusion Model (CBIM).

### RESEARCH METHOD

Research literature on aspects of communication that may pose barriers for post-secondary students with autism was reviewed. This was followed by a discussion of the CBIM, a model based on a partnership between an urban public school programme for students with significant disabilities and a local college campus. The different methods utilised by the CBIM in order to select appropriate transition goals for specific students were also examined.

### RESEARCH FINDINGS

The core deficits of autism that affect communication, such as joint attention and abstract symbol usage, may change and improve as children mature but usually they do not disappear. These core deficits can manifest themselves in different ways as students reach later developmental stages. The challenges that such deficits pose to communication are a major concern, particularly in post-secondary environments where individuals are expected to communicate effectively and comfortably with their peers without supervision.

Four aspects of communication that may pose challenges to individuals with autism were discussed within this study:

#### 1. Conversational Skills

In spite of improvements in language over time, some parents have reported that in adolescence a lack of social communication skills remains the biggest weakness for individuals with autism. Particular conversational skills that have been shown to be affected include staying on topic, extending topics with new, relevant and/or sufficient information, and responding to non-verbal social cues. Indeed, it has been found that many adolescents with autism tend to communicate through long monologues on topics of their choosing, perseverating on these, as opposed to engaging in reciprocal conversation. In addition, research has found that communication competence varies not only across individuals but also across contexts and partners.

#### 2. Speech and Prosody

Research has shown that adolescents with autism tend to have deficits in vocal parameters. Examples of such deficits can include using inappropriate volume, pitch, stress patterns or inflection and exhibiting a greater frequency of articulation errors, disfluency and word revisions.

#### 3. Awareness of Listener

It has been found that adults with autism continue to demonstrate an inability to keep the listener's perspective in mind. This lack of awareness can manifest itself through a decreased use of personal pronouns, temporal expressions, referential expressions and/or past tense. In turn, omission of these linguistic forms can lead to confusion in the listener and reflects the speaker's unawareness and/or unresponsiveness to the listener's level of interest.

#### 4. Social and Vocational Implications

Language functioning is a key factor in predicting friendship and social interactions in older individuals. Research indicates that adults with autism demonstrate language difficulties that affect such social interactions and also vocational success. In particular, inability to understand idioms, double meanings and body language have been reported. Furthermore, tendency to make

## College-Based Inclusion Programming for Transition-Age Students with Autism

irrelevant comments and a lack of knowledge of when to ask questions were also noted. This was particularly found to be an issue with regard to employment, whereby several researchers reported that those with autism often did not know what to say in job interviews, were confused by negative responses to their bluntness or excessive questions, and were more frequently fired because of their social and communicative difficulties than for poor job performance.

### CAMPUS-BASED INCLUSION MODEL (CBIM)

The mission of the CBIM is to educate students with autism and intellectual disabilities alongside their peers in order to provide a positive, age-appropriate post-secondary option that will prepare them for adult living. Students participating in this programme, although enrolled in high school, attend all their classes on a college campus. They are allowed to select their own courses and, prior to beginning the programme, receive mobility training to allow them to travel to and from the college. In addition, students have opportunities to participate in supervised vocational preparation experiences at college-based job sites and can participate in many aspects of campus life. Weekly group and individual communication skills sessions are also incorporated and reinforced in different settings. Appropriate transition goals for such individuals are identified using one of three methods, namely standardised testing, observation in naturalistic settings, and conducting the self-efficacy survey of communication competence. Outlined below is a summary of these three approaches.

#### 1. Standardised Testing

The Pragmatic Judgement subtest of the Comprehensive Assessment of Spoken Language (CASL) is one such standardised test administered within the CBIM in order to identify transition goals for older individuals with autism. It is specifically suited to document language difficulties, and as a result has been shown to provide suitable goals to help students with autism become more aware of their

communication partner's perspective. Research has indicated that this approach can also lead to significant improvements in aspects of social communication such as reciprocal conversation and selection of appropriate responses.

#### 2. Observation in Naturalistic Settings

This method is a student-centred approach that allows the development of social communication goals through the observation of individuals in their natural environment. In this way educators are able to address real-life challenges faced by those with autism, such as social communication difficulties, and in turn can put in place measures to improve these skills.

#### 3. Self-Efficacy Survey of Communication Competence

As several researchers had cited difficulty with the reciprocal nature of conversation, a questionnaire was developed (based on a review of the literature on communication skills of adolescents with autism) and was worded in ways understandable to individuals with autism and intellectual disabilities. The first five questions of this questionnaire were designed to probe individuals' perceptions of their competence in areas such as starting conversations, continuing a topic of conversation, taking turns, changing the topic, and knowing how much or little to say. The last five questions, on the other hand, focused on the individual's self-perception in areas such as asking questions when they do not understand, expressing ideas so the listener understands, knowing when the listener is interested or understands, understanding jokes, slang or humour, and knowing how to talk in different situations or with different people. The last part of the questionnaire allowed individuals to describe any additional communication they felt they needed to work on.

### IMPLICATIONS FOR PRACTICE

*(by the authors)*

This study reinforces the importance of and need for inclusion programmes for transition-age adolescents with autism. Indeed, whilst it is known that post-secondary

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## College-Based Inclusion Programming for Transition-Age Students with Autism

training is a legitimate path to maximising the personal growth of students with disabilities, college programmes, although more accessible than previously, are still often not able to provide the precise services needed for these students. Consequently there is a gap between the hopes of these adolescents and their families and the availability of resources in the college transition process. This study addresses this issue by highlighting the challenges that post-secondary adolescents with autism face in the area of social communication before recommending the CBIM as a good means of addressing such deficits through the creation of individualised inclusion programmes that aim to deliver support services to these students alongside their same-age peers.

The recommendation to deliver such post-secondary programmes alongside same-age peers is particularly important as research has shown that there are those with autism who continue to be excluded from college programmes alongside their peers due to intellectual disabilities, which may prevent them from completing college-level work without substantial modifications. These individuals often remain in special education classes

with younger students, which is problematic as legislation states that students with disabilities must be included in educational settings with their same-age peers.

The authors also highlight the importance of creating an inclusion programme that is individualised as research has shown that communication competence can vary across individuals, contexts and partners. It is suggested that this be conducted by means of a thorough assessment for each individual. Through this, transition targets specific to each individual student can be set and the appropriate support services put in place. In this way students can become active participants in developing their own programmes to enhance the development of their social competence and, in turn, can become equipped with the practical strategies needed in order to improve not only their academic, social and vocational skills but also their quality of life.

### FULL REFERENCE

Zager, D. and Alpern, C. (2010). College-Based Inclusion Programming for Transition-Age Students with Autism. *Focus on Autism and Other Developmental Disabilities*, 25(3), p. 151-157.

## Individual Education Plan Goals and Services for Adolescents with Autism: Impact of Age and Educational Setting

### RESEARCH AIM

The aim of this study was to describe educational programmes for adolescents with autism in inclusion and non-inclusion settings as reflected in the goals of their Individual Education Plan (IEP), services and curricular adaptations. Three main questions were addressed, namely: What appear to be areas of focus in IEP goals for students with autism? What seem to be trends in goals and objectives as students with autism enter adolescence? Do IEP goals and objectives appear to vary by student placement in inclusion and non-inclusion settings?

### RESEARCH METHOD

Five special education teachers and 15 adolescents with autism (12 boys, 3 girls) took part in this study. Participants were recruited from three school districts within Northern California and student participants had an age range of 12-15 years. All student participants met the following criteria: had diagnoses of autism as opposed to Asperger's or other related conditions; did not have any co-morbid conditions; were native English speakers; had IEPs for the current school year as well as IEPs dating to at least kindergarten; and had been continuously enrolled in either inclusion or non-inclusion educational settings since kindergarten. Of the 15 students who participated, seven were enrolled in inclusion programmes and eight were non-included. Cognitive, adaptive and academic assessments were conducted in order to determine the relative equivalence of both groups. A quasi-experimental design was employed and the cumulative IEP records for student participants were reviewed.

### RESEARCH FINDINGS

#### Number of IEP Goals

Student participants within this study were found to have a significant number of IEP goals throughout their education. The number of goals, however, varied significantly by age

for both inclusion and non-inclusion groups. Indeed, students within elementary school had more goals than students in middle school, along with more curricular adaptations. Furthermore, the number of goals varied significantly by instructional setting whereby students who were included had fewer average goals compared to those not included.

#### IEP Goals by Domain and Setting

Although all student participants within this study had statistically equivalent intelligence and adaptive behaviour skills, the types of IEP goals tended to vary by setting. Students who were included had more IEP goals targeting applied skill development such as reading comprehension, writing passages for expressive communication and solving word problems, whilst those who were not included had goals primarily addressing functional rote and procedural tasks such as writing neatly, calculating sums and reading word lists.

For students in both groups, all IEP goals were derived from kindergarten through to fourth grade standards. Similarly, for students in both groups most IEP goals addressed the core symptoms of autism, for example communication skills, as opposed to academic skill development.

#### Progress in Meeting IEP Goals

Students in both inclusion and non-inclusion settings had limited success in attaining their goals. It may be noted, however, that those in inclusion settings met significantly more goals compared to those in non-inclusion settings. Furthermore, results showed that teachers did not report goal progress a significant percentage of the time, with a substantial downward trend over time. Again, however, those teachers in inclusion settings reported goal progress more frequently than those in non-inclusion settings.

#### Services and Adaptations

Type of services provided and the number of adaptations present in students' IEPs differed significantly by age,

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## Individual Education Plan Goals and Services for Adolescents with Autism: Impact of Age and Educational Setting

with students in elementary school more likely to receive remedial services such as occupational therapy and fewer adaptations, whereas students in middle school were more likely to have support services such as behaviour supports and more adaptations. Similarly it was found that type of service and the number of adaptations present in a student's IEP differed significantly by setting, whereby students in inclusion settings were more likely to have classroom assistant supports and more adaptations than those in non-inclusion settings.

### IMPLICATIONS FOR PRACTICE

(by the authors)

- The results of this study are significant as they highlight that factors such as age and educational setting can influence IEP team decisions and IEP development for adolescents with autism, when in fact IEP contents are intended to be driven solely by individual student needs.
- This study also highlights that goals are often set in domains that are linked to the core symptoms of autism as opposed to academic skills. The authors suggest that such an approach can be detrimental to adolescents with autism and therefore recommend that IEP goals should be tied to state standards, based on a general education curriculum, in order to provide a challenging and sequential curriculum that is in line with No Child Left Behind and IDEA (Individuals with Disabilities Education Act data, 2006) requirements. Additionally, where IEP goals are set that focus on improving procedural and rote skills, as was the case for goals set for those in non-inclusion settings within this study, the authors state that such goals should eventually lead to participation and understanding in the applied uses of these skills.
- Furthermore, findings from this study indicated that students often failed to meet their goals (as assessed by the number of times a goal was repeated in subsequent IEPs), and that teachers often did not record the progress of IEP goals set. As a result of this the authors state that firstly, in order to address students' inability to meet

the majority of their goals we must look at factors such as the number of goals set, their relevance to that specific student and the practicality of implementing such goals/accommodations within daily classroom life. Secondly, with regard to improving teachers' ability to record students' progress we must seek to develop an effective means of collecting data across settings and monitoring student progress. By doing so teachers will be better placed to determine when a goal has been met or if more instruction is needed.

- Finally, the authors of this study acknowledge that in order to further develop the findings of this study future research should focus on areas such as: understanding why and how the variables of age, setting and disability diagnosis influence IEP content; how we should effectively incorporate IEP goals within the general education curriculum; what methods should be used in order to adapt the core general education curriculum in ways that are meaningful and enriching to adolescents with autism; what are effective and efficient methods of collecting and reporting progress data; what kinds of goals are more or less likely to be attained in various settings whilst controlling for factors such as meaningfulness, age appropriateness and value to the student; correlation between the quality of goals and their proposed accommodation; the linkages of IEP goals to state standards; and the effects of staff turnover. The authors further state that any future research should be conducted with a larger sample size recruited from a larger geographical area.

### FULL REFERENCE

Kurth, J. and Mastergeorge, A. M. (2010). Individual Education Plan Goals and Services for Adolescents with Autism: Impact of Age and Educational Setting. *The Journal of Special Education*, 44(3), p. 146-160.

## Facilitating Inclusion by Reducing Problem Behaviours for Students with Autism Spectrum Disorders

### RESEARCH AIM

There is an increased emphasis on including students with disabilities in general education settings. Such inclusion, however, is difficult given the wide range of behaviours that students with autism present with. As little research has been conducted in order to determine best practices in reducing problem behaviours and promoting inclusion for students with autism, the purpose of this study was to conduct a literature review with the aim of identifying empirical research articles in the past 10 years that: (1) included students with autism in kindergarten through 12th grade; (2) facilitated inclusion; and (3) reduced problem behaviour.

### RESEARCH METHOD

Relevant research articles for this literature review were identified using three major psychological and educational electronic research databases. All research articles selected met the following criteria: were published within the past 10 years; were empirical; included at least one school-age student with autism; and contained an intervention with the purpose of facilitating inclusion which had to have at least one school-based component. In addition, all articles were required to have either measured or discussed the efficacy of the intervention to reduce problem behaviour. Overall seven articles met these criteria and were subsequently included within this literature review.

### RESEARCH FINDINGS

This study found that four main intervention themes were effective in promoting inclusion:

1. Functional behaviour assessments (FBAs), which are used to identify the antecedents, consequences and setting events that maintain or trigger the problem behaviours in order to develop appropriate interventions.
2. Tiered models of service, whereby at tier one universal preventative efforts are implemented, at tier two targeted intervention efforts within a small group setting are implemented, and at tier three FBAs are utilised.
3. Social skills training.
4. Behavioural approaches.

All research articles reviewed generally reported positive outcomes, e.g. decreased levels of problem behaviour and increased levels of appropriate behaviour with regard to such intervention themes.

### IMPLICATIONS FOR PRACTICE

*(by the authors)*

This study highlights the importance of selecting interventions that are designed to reduce problem behaviours and thus promote inclusion for students with autism. This is particularly relevant given legislation has placed an increased emphasis on including students with disabilities within general education settings. This study also highlights how measuring inclusion is a vital component of evaluating intervention efficacy. Whilst research reviewed within this study did not systematically measure or evaluate inclusion, the authors recommend that one way of doing this would be to document time spent in the general education classroom pre- and post-intervention. They further suggest that inclusion could be measured by measuring acceptance, participation and achievement, tracking peer and teacher interactions through systematic observation, and conducting student interviews to identify perceptions of acceptance within the general education classroom. By utilising one or more of these suggested methods to measure inclusion, as well as implementing research-based interventions like those reviewed in this study, educators can potentially reduce problem behaviour and promote the inclusion of students with autism.

### FULL REFERENCE

Von Der Embse, N., Brown, A. and Fortain, J. (2011). *Facilitating Inclusion by Reducing Problem Behaviors for Students with Autism Spectrum Disorders. Intervention in School and Clinic, 47(1), p. 22-30.*

## Observational Learning and Children with Autism

### RESEARCH AIM

This research paper aimed to outline the essential skills needed for observational learning. The researchers also aimed to provide practical strategies for teachers on how to improve the observational learning skills of children with autism. The rationale for this article is that research indicates learning by observing others is an essential skill needed for successful integration in education settings.

### RESEARCH METHOD

The researchers reviewed past research that was concerned with observational learning and teaching children with autism observational skills.

### RESEARCH FINDINGS

The researchers concluded that attending, delayed imitation and discrimination of contingencies are specific skills that appear to be required for observational learning to occur. For children with autism, these skills are often deficient or delayed, which may impede learning in environments that rely heavily on observational learning.

From reviewing previous research studies that have investigated how successfully children with autism utilise the skills needed to learn through observation, the researchers found that some but not all children with autism learned through observational learning. The researchers maintained that observational learning enabled greater social integration. Therefore, they concluded that it is necessary to teach the prerequisite skills previously listed to children with autism to enable them to learn through observing.

A number of strategies are identified to aid teachers in teaching the skills needed for observational learning:

- **Teach sustained attention to peers**

This is designed to increase the skill of attending for enough time to be able to make observations and

discriminations concerning it. There is little research about methods to increase sustained attention in children with autism, but the researchers discuss one method – shaping. In this method teachers give reinforcement if the child attends or orientates themselves for increasing periods of time towards a model to obtain the reinforcement. Using a peer to model the behaviour or action is recommended to increase social interaction with peers. The peer is given something interesting to model and the child is instructed to look at the other child before giving reinforcement.

Attention can also be taught with a class-wide approach. For example, by monitoring attention throughout the day the teacher can offer directives to look at peers performing actions. Pupils could be asked to recall a name or action to ensure attention has taken place.

- **Promote generalised imitation of peer's vocal and motor responses**

The researchers maintain that peer imitation is an essential pre-requisite skill for observational learning. Imitation is when a child's behaviour is connected to the behaviour of a model and is topographically similar to that of the model. Prompting and reinforcement can be used to increase imitation. This could be done through asking a peer to complete an action and then asking the child to do what the peer is doing, giving help to complete the action if necessary. The child is then given the reinforcement. Several different actions in different contexts should be used to aid generalisability.

- **Teach discrimination of consequences**

One of the most complex aspects of observational learning is discriminating the consequences of the responses of others. This is particularly difficult for children with autism due to the complex and abstract concepts needed to understand discrimination. The researchers highlight a need for the development of strategies to teach discrimination and studies to validate

## Observational Learning and Children with Autism

these methods. Nevertheless, the researchers report one study which found that five-year-old children with autism, after training, were able to discriminate between peer responses.

### IMPLICATIONS FOR PRACTICE

*(by the authors)*

- Social inclusion is an important issue for children with autism, and teachers, parents and health professionals must ascertain how children can develop the skills needed to be included.
- There are many benefits of observational learning, such as its role in increasing social interaction and developing independence. These factors can, in turn, support the social integration of the child with autism. Consequently,

there is a need to explicitly teach children with autism the necessary skills to be able to learn through observation.

- When teaching the skills needed for observational learning it is important to consider the interests of the child to initially engage the child's attention to the peer. This is also essential when deciding what reinforcement should be given.
- More research is needed to confirm the essential prerequisite skills needed for observational learning to take place. Furthermore, more research to validate the methods presented to teach these skills is required.

### FULL REFERENCE

Taylor, B. A. and DeQuinzio, J. A. (2012).  
Observational Learning and Children with Autism.  
*Behaviour Modification*, 36(3), p. 341-360.



## Inclusion is not simply an educational goal...

...it is an approach that addresses a pupil's entire school experience that ultimately involves the pupil's school community and family. Support for inclusion should be provided across the school day and can include the following strategies:

- An individualised pupil-centred approach
- The promotion of self-management and education
- The use of peer support.

Strategies to promote inclusion should also be provided as core teacher training and regularly refreshed as continuing professional development.

Inclusion is not just an issue for teachers of primary and post-primary pupils; it should also be promoted in preschool and in further and higher education. Specific strategies to promote inclusion for very young children and older students are discussed in this current Bulletin.

The next Middletown Research Bulletin addresses the area of sensory processing. Anyone interested in contributing to a Research Bulletin or with any ideas about future Bulletins should contact the Centre using the email: [research@middletownautism.com](mailto:research@middletownautism.com).

# NOTES

## 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  
Inclusion**





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