

SPEAC Project Evaluation and Report



Summary of the Activities and Outcomes of the
SPEAC Service at Tor Bank School, 2005 - 2011

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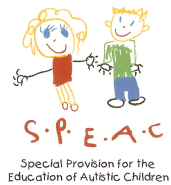


TABLE OF CONTENTS

Executive Summary

I. Introduction

- A. History of the SPEAC Charity
- B. Partnerships and Fundraising
- C. Aims of the Project

II. Autism and Education

- A. Overview of Autism
- B. Evidenced-Based Practice

III. The SPEAC Service at Tor Bank School

- A. Years 1 – 3, The Self-Contained SPEAC Classroom
- B. Year 4, Integration, Intensive Support Team and Home Support
- C. Year 5, The Intensive Support Team and Home Support
- D. Year 6, Primary Years Training and Support

IV. Outcomes of the Project

- A. Children and Families
- B. Teachers and Related Staff
- C. School Wide Impacts

V. Evidence for Outcomes

- A. Highlights from Education and Training Inspectorate Report
- B. Highlights from Professor Howlin's Report
- C. Comments from Teachers
- D. Comments from Parents

VI. Consideration for the Future

References

EXECUTIVE SUMMARY

Introduction

Autism is a complex developmental condition that affects an individual's ability to interact with others, to communicate effectively and to use their imagination; these areas of difficulty are often compounded by patterns of repetitive and challenging behaviour. Autism enters into the lives of families uninvited and unannounced; there are no signs at birth and no warning to alert parents as to what lies ahead. Approximately 1 in 100 children have been diagnosed with the condition. There are approximately 4000 school-aged children with autism in Northern Ireland, demonstrating a significant need for the ongoing development of innovative and evidenced-based educational practices.

The SPEAC Service at Tor Bank School was a determined attempt to improve the educational service provision for pupils with autism and severe learning difficulties within the special school sector. This unique partnership and project was a ground breaking initiative that aimed to demonstrate, by example, that the use of well-researched and evidenced-based practice can significantly increase the efficacy and outcomes of educational programming for young pupils affected by autism and severe learning difficulties. The SPEAC Service at Tor Bank School was several years in the planning and six years in implementation.

Objectives

The **primary objectives** of the project were to demonstrate, by example, the advantages of providing an autism-specific and evidenced-based educational facility to children with autism, severe learning difficulties, and challenging behaviours, and to lay the groundwork for the establishment of a permanent facility in Northern Ireland that uses evidence-based approaches to educating children with autism.

A **secondary objective** of the project was to create a centre of excellence for educational professionals by providing a model for innovative, evidenced-based practice, using a collaborative inter-sector approach to education and creating a template for the expansion of the scheme to a larger scale. Most importantly, the project aimed to enrich the personal, social and educational development of pupils with autism, through the delivery of quality educational provision that embraces the whole child, inclusive of their families and community.

Activities

In September 2005, the SPEAC Charity, a parent-founded and parent-run organisation, facilitated the opening of a centre-based programme for children with autism, severe learning difficulties and challenging behaviour at Tor Bank School in Dundonald, Northern Ireland. The Centre represented an **unprecedented partnership** between a voluntary-sector parent-governed organisation (SPEAC), a statutory body, the South-Eastern Education and Library Board (SEELB), and Tor Bank School, who agreed to host the project.

The initial aims of the **centre-based programme** were to (a) teach children specific “learning to learn” skills to enable them to cope with increasingly inclusive settings, and (b) reduce stigmatizing, dangerous and otherwise interfering behaviours that were limiting opportunities for inclusion and integration. Secondary aims were to (a) teach functional life skills, (b) improve communication, (c) provide outreach and information to families and caregivers, and (d) provide ongoing training to those working within the classroom.

The centre-based programme did, in fact, demonstrate the benefits of using evidenced-based practice in the education of children with autism, severe learning difficulties and autism, as well as having positive collateral effects on the immediate family, extended family and communities of its pupils. Further to this, the initial stages of the programme lay the groundwork for the second half of the programme, during which the SPEAC Service at Tor Bank School was expanded to support the school on a larger scale. The SPEAC Service, during its second half of existence, provided support to the inclusion of centre pupils into classrooms in the main body of the school, assisted in the development and workings of an Autism and Intensive Support Team within the school, initiated the development and delivery of a Home Support Programme, and implemented a practical, ongoing Teacher and Staff Training initiative. These activities had a significant and lasting impact on the school's provision for pupils with autism.

Outcomes

The provision offered in the centre-based programme underwent rigorous **monitoring and evaluation**. Through systematic educational target setting and measurement, individual pupil progress was assessed. The methodology used and the teaching structures resulted in demonstrable gains in functional skill development, and in some cases a significant reduction in challenging behaviours in the pupils. On a centre-wide level, the SPEAC Charity commissioned an independent evaluation of the strengths and weaknesses of the provision; the evaluation was carried out by Professor Patricia Howlin, a world-renowned expert in the field. The results of this evaluation supported the centre staff, teacher, parents and family reports of individual pupil gain. Additionally, the Department of Education Commissioned the Education and Training Inspectorate to provide their perspective on the provision and advice regarding the valuable aspects of the provision.

Despite the strengths of the centre, and the demonstrable gains achieved by the pupils within the centre, the project did not succeed in convincing the statutory bodies to replicate the service provision through the continuation of the centre, the establishment of additional centre-based programmes or the establishment of an autism-specific and evidenced based facility for children with autism. However the centre did succeed in the dissemination of best practice for supporting pupils with autism and indeed had a lasting effect on the autism specific provision at the school. One of these last effects includes improved staff capacity to use evidenced-based strategies to identify and measure teaching targets, to assess and reduce challenging behaviour and to teach socially significant and functional life skills to pupils. Additional lasting effects include improved documentation systems for behaviour management and target setting and teaching, the development of Home Support Programme, the provision of a wide range of teaching materials and resources and school-wide access to a purpose build outside play facility for pupils of all ages. In summary, the centre-based programme provided life-changing environments for the children, parents, families and teachers.

Considerations

The main aim of the project was to enrich the personal, social and educational development of pupils with autism, through the delivery of quality educational provision that embraces the whole child, inclusive of their families and community. In doing so, the project aimed to demonstrate, by example, the advantages of an autism-specific and evidenced-based approach to educating children with autism, severe learning difficulties, and challenging behaviours. As illustrated by the report, SPEAC's contributions have been instrumental in the development of a collaborative and innovative approach to education at Tor Bank School. It is hoped that the lessons learned through this project can continue to influence the provision at the school, and other partner schools, as the positive aspects of the service model are replicated and expanded.

I. INTRODUCTION

A. History of the SPEAC Charity

Special Provision for the Education of Autistic Children (SPEAC) is a registered charity, founded in 2002 by a group of parents who sought to transform educational provision for children with autism in Northern Ireland. SPEAC's establishment and activities were motivated by the overwhelming need to help children with autism by bring the latest educational techniques and resources to their educational provision across the ages. Scientific evidence was clear: sound, research-based intervention greatly benefits a child's ability to learn and provides the key to life-changing opportunities for children, transforming their lives and the lives of their families.

SPEAC maintains that the true purpose of education is maximizing every child's potential. Every young person with autism has enormous potential, and as parents, family members and teachers, we have the capacity and skills to help them realise this. We believe that an evidenced-based approach to education, in both the home and school settings, is vital in ensuring young people with autism reach their potential and have a fulfilling life.

In September 2005, SPEAC facilitated the opening of a centre-based programme for children with autism, severe learning difficulties and challenging behaviour at Tor Bank School in Dundonald, Northern Ireland. This Centre represented an unprecedented partnership between a voluntary-sector parent-governed organisation (SPEAC), a statutory body, the South-Eastern Education and Library Board (SEELB), and Tor Bank School, who agreed to host the project.

The SPEAC Charity received outstanding support from two key patrons, whose commitment to the education of children led them to invest their time and efforts in this exciting project. **Keith Duffy**, musician, actor, activist and parent of a child with autism, participated in the early development of SPEAC's work through public appearances, campaigning and fundraising. **Rory McIlroy**, US Open Champion and Ryder Cup star, lent his support through visits to the centre and additional fundraising efforts. SPEAC would like to extend their appreciation to their two patrons, whose commitment to the project made a significant difference.

B. Partnerships and Fundraising

The activities embarked upon by SPEAC were enhanced by partnerships with other statutory and voluntary organisations and were made possible by various sources of funding. SPEAC had the opportunity to work in conjunction with the South Eastern Education and Library Board and Tor Bank School to initiate and carry out the project, and to pursue future avenues for continuation of the project. SPEAC also shared the support of Autism NI, Northern Ireland's leading autism charity, as they work collectively towards lobbying for the rights of individuals with autism.

The Principal of Tor Bank School, Mr Colm Davis, was instrumental in the co-ordination of the partnerships. Tor Bank School is located within the South Eastern Education and Library Board, and caters for children with severe learning difficulties between the ages of 3 and 19. At the time the collaboration commenced, the school had 40 pupils with challenging behaviour, 30 of whom had a diagnosis of autistic spectrum disorders. Mr Davis' commitment to collaboration and best practice assessment procedures and intervention programmes for pupils within the school was key to the project.

The SPEAC Service at Tor Bank School was funded by various sources. The funding for the first stage of the service (the centre-based programme), was provided by the South Eastern Education and Library Board (SEELB), Tor Bank School and SPEAC. The SEELB provided a mobile classroom and six classroom assistants to support the pupils within the centre. Tor Bank School provided a class teacher, materials and resources and access to facilities within the main body of the school. SPEAC provided funding for various levels of professional expertise and advice (detailed later in this report), access to intensive and ongoing staff training and support, and wealth of materials and resources required to carry out the project.

A wide-range of funders made the SPEAC contribution possible. These funders include: Brendan J McGinn, Garfield-Weston, Gordon's Chemists, Keith Duffy, Lloyds TSB Foundation for Northern Ireland, Myleen Klass, Northern Ireland Life and Pension Society, Peter Lavery's Charity Challenge, Philip Johnson, Radisson Hotel – Belfast, St Stephen's Green Trust, The Bailey Thomas Charitable Foundation, The Bar Council, The Enkalon Foundation, The Hilton Foundation (Hilton Templepatrick), The Open Work Foundation Cares 4 Kids, Ulster Bank Staff Charity Fund and Ulster Garden Villages. Further funds were made available through several generous anonymous donors.

C. Aims of the Project

The aims of the project were to demonstrate, by example, the advantages of an autism-specific and evidenced-based educational facility for children with autism, severe learning difficulties and challenging behaviours, and to lay the groundwork for the establishment of a permanent facility in Northern Ireland that uses evidence-based approaches to educating children.

Further to this, the project aimed to create a centre of excellence for educational professionals by providing a model for innovative, evidenced based practice, using a collaborative inter-sector approach to education and creating a template for the expansion of the scheme to a larger scale. Most importantly, the project aimed to enrich the personal, social and educational development of pupils with autism, through the delivery of quality educational provision that embraces the whole child, inclusive of their families, school and community.

II. AUTISM AND EDUCATION

A. Overview of Autism

Autism is a complex developmental condition that affects an individual's ability to interact with others, to communicate effectively and to use their imagination; these areas of difficulty are often compounded by patterns of repetitive and challenging behaviour. Autism enters into the lives of families uninvited and unannounced; there are no signs at birth and no warning to alert parents as to what lies ahead. Approximately 1 in 100 children have been diagnosed with the condition.

Children with autism are affected with varying degrees of severity, and the condition affects four times as many boys as girls. Approximately 25% of individuals with autism have an accompanying learning disability. Sadly, there is no cure for autism, but there is evidence that early diagnosis, evidenced based intervention approaches and specialized care, especially in the early years, can help individuals with autism to live with dignity and as independently as possible.

The outlook for children who do not receive appropriate education is bleak. Research shows that 60% of individuals with autism will be dependent on others into adulthood, and the lifetime cost of autism is estimated at a staggering £2.9 million per person (Knapp et al. 2009, Romero 2009, 2010). Only 7% of that cost is spent on education. Even a moderate increase in investment in on education would potentially lead to savings later in life.

There are currently over 20,000 individuals affected by autism in Northern Ireland. More than 300 children in Northern Ireland are diagnosed with autism every year. In 2010, there were approximately 4000 school-aged children with autism in Northern Ireland, demonstrating a significant need.

B. Evidenced – Based Practice

With the high prevalence of autism has come a corresponding increase in the number of available interventions and strategies claiming to remediate the impact of autism. The range of interventions and strategies leaves both families and professionals lost in a whirl-wind of information and opportunity. In an effort to develop an effective and meaningful process by which to determine which of those opportunities have the potential to be useful, standards for evidenced-based practice have emerged. Those interventions and strategies that can be described as evidenced-based are those that have significant, convincing and empirical efficacy and support.

A recent report (2009), written by the Maine Department of Health and Human Services and the Maine Department of Education, states that:

“Evidence-based practice does not seek to dictate the interventions that should be used at the expense of others. Rather, it is a framework to integrate what is known from research into real-world practice in a manner that is accessible to families, responsive to what children need, and consistent with what providers can accomplish given available skills and resources.”

The use of strategies based upon the principles of Applied Behaviour Analysis (ABA) have been subject to extensive and thorough research, across many different populations, all of which consistently demonstrates its effectiveness in randomized controlled trials (Jocelyn et al. 1998, Drew et al. 2002, Eikeseth et al. 2002). There is very strong evidence that ABA is a highly successful behavioural and educational intervention for autism. In fact it has been judged the most effective medium of education in a recent UK review (Remington et al. 2007). It is for these reasons that the use of ABA within the field of education is becoming increasingly popular within the UK and Ireland. In retrospect, from a perspective of 2011, this approach remains the most successful evidence-based practice. Eldevik et al (2009) for example, in a recent meta-analysis overview conclude:

“Our results support the clinical implication that at present, and in the absence of other interventions with established efficacy, Early Intensive Behavioral Intervention should be an intervention of choice for children with autism.”

Applied Behaviour Analysis (ABA) is a learning theory that can be used to effect long-term, meaningful change in behaviour. An understanding of the principles of ABA gives teachers and parents the means to pinpoint critical skills and behaviours that can be targeted for change. It also provides a variety of strategies that would help to reduce challenging behaviours by increasing functional, appropriate behaviours. Finally, ABA provides the methods to objectively evaluate (and measure) the strategies used to determine whether it has affected meaningful change in the behaviour of the individual. As noted in the Maine Report (2009), ABA does not employ one specific strategy but instead works from a broad scope of empirically derived behavioural principles, used in a range of interventions, to teach a variety of skills across multiple domains.

During the formative stages of the SPEAC Charity, the importance of evidenced-based practice was evident, and the group aimed to develop a project that capitalized on the existing research. They consequently sought the support and advice of a leading London-based agency that has experience in doing so: The TreeHouse School. The TreeHouse School, (now a subsidiary of the charity Ambitious About Autism, www.ambitiousaboutautism.org.uk), is a pioneering, educational facility for pupils with autism that uses evidenced-based practice as a foundation for its teaching. Experienced educational professionals from the TreeHouse School were instrumental in supporting the development and implementation of the SPEAC Service at Tor Bank School, and led the way in the application of evidenced-based teaching approaches to all aspects of the project provision. The benefit of their experience and expertise was considered essential to the successful delivery of the SPEAC service.

III. THE SPEAC SERVICE AT TOR BANK SCHOOL

A. Academic Year 1 – 3 (2005 – 2008)

The Self-Contained SPEAC Classroom

Aims of the Project: The aims of the project were to demonstrate, by example, the advantages of providing an autism-specific and evidenced-based educational facility to children with autism, severe learning difficulties and challenging behaviours, and to lay the groundwork for the establishment of a permanent facility in Northern Ireland, with equality of access. In order to prove that such an ambitious task was feasible, we developed a pilot scheme with a view to expanding this on the completion of the pilot. The initial aims of the pilot within the self-contained classroom were to (a) teach children specific “learning to learn” skills to enable them to cope with increasingly inclusive settings, and (b) reduce stigmatizing, dangerous and otherwise interfering behaviours that were limiting opportunities for inclusion and integration. Secondary aims were to (a) teach functional life skills, (b) improve communication, (c) provide outreach and information to families and caregivers, and (d) provide ongoing training to those working within the classroom.

Activities of the Project: The SPEAC Classroom was in operation from the 2005 – 2006 academic year until June of 2008. During this time, six pupils with severe learning difficulties, autistic spectrum disorders and challenging behaviour were in attendance. These pupils accessed a highly specialised and individualised approach to education, through the delivery of one-to-one teaching sessions and supported integration into activities in the main body of the school. The principles of Applied Behaviour Analysis were used to guide the teaching, with an emphasis on meaningful targets that would impact upon the individual pupils educational, social and personal development within the home, school and community. In the planning for this project, and through its three year delivery period:

- ⇒ The SPEAC Charity solicited advice and consultation from TreeHouse School in London. The TreeHouse School, now a subsidiary of the charity **Ambitious about Autism**, is a world-leader in the field of autism-specific and evidenced-based practice. A Consultant Behaviour Analyst from the TreeHouse School was appointed to the project, and provided expert advice in relation to the establishment of the classroom, the ongoing delivery of education based upon the principles of Applied Behaviour Analysis and the continued development of centre staff skills and expertise.
- ⇒ The SPEAC Charity also solicited the advice and services of a Supervising Behaviour Analyst from the Centre for Early Autism Treatment (CEAT), a non-profit making organisation based in Belfast (www.ceatni.net). The Supervisor provided twice-weekly visits to the centre, during which time she carried out the recommendations made by the TreeHouse Consultant, implemented quality-assurance measures and provided individual “clinics” to monitor and promote pupil progress.
- ⇒ A Class Teacher was appointed by the school to oversee the running of the classroom. Additionally, a Class Leader was appointed by the SPEAC Charity, Tor Bank School and Tree House School (and funded by SPEAC) to work collaboratively on the day-to-day running of the classroom. The Class Leader provided additional experience in the application of the principles of Applied Behaviour Analysis to the delivery of the Individualised Education Plans for each pupil within the centre, facilitated the implementation of individualised teaching programmes and contributed to ongoing staff training.

- ⇒ Six classroom assistants were appointed by the Principal of Tor Bank School to work within the classroom. Classroom Assistants were funded by the SEELB and the school; the accessed additional working hours for training funded by SPEAC. Classroom Assistants were appointed as Key Workers for each of the pupils , providing the needed continuity for the pupil and management of the educational programme. One Classroom Assistant was supported by SPEAC in her efforts to access a Masters Degree in Applied Behaviour Analysis from the University of Ulster – Coleraine.
- ⇒ All members of the SPEAC Centre Staff, including the Supervisor, Class Leader, Teacher and Classroom Assistants attended an extended training programme at TreeHouse School, prior to the opening of the centre. They accessed theoretical and practical training in the application of the principles of Applied Behaviour Analysis, including: choosing appropriate educational targets, writing operational definitions, using discrete trial teaching, using positive reinforcement, using functional assessment of challenging behaviour, using task analysis to teach activities of daily living and implementing group lessons.
- ⇒ Throughout the school day (9:00 am – 3:00 pm), students accessed a range of activities, including one-to-one teaching, small group lessons and centre-wide activities; all pupils participated in regular community trips and swimming lessons as well. Pupils accessed both Occupational Therapy and Speech and Language Therapy at the same frequency as other pupils in the school. Centre pupils also regularly attended school-wide weekly assembly, lunch in the dinner hall, and special events or activities. The also had regular access to community trips.
- ⇒ Each pupil had an individualised programme of teaching and learning. This programme was carefully detailed, delivered and measured using the principles of Applied Behaviour Analysis. A balance of individualised targets was established for each pupil, to ensure that all of the personal, social and educational needs were met throughout the school day. Additionally, each pupil accessed an individualised Behaviour Support Plan, which aimed to reduce those challenging behaviours that posed risk to the student’s safety and served as barriers to his learning.
- ⇒ Over time, as the pupils progressed, opportunities for inclusion were built into their individualised plan. Some pupils accessed a “reversed inclusion” opportunity during which time pupils from the main body of the school were brought to the centre to participate in structured peer play sessions. Additionally, pupils were also given then opportunity to join other classes within the school for special events, activities or lessons, thereby broadening their educational environment.
- ⇒ The families of each pupil in the centre accessed fortnightly home visits from members of the centre staff. These visits provided a forum in which parents could see, first hand, the work that was being done with their child during one-to-one teaching time. Additionally, it provided the opportunity for parents to contribute their observations, input and preferences for targets. This also provided access to advice and support strategies that had been proven successful in school for development their child’s ability to participate in activities of daily living with increased ease and independence.
- ⇒ Following completion of the academic terms, the SPEAC Centre hosted a two-week Summer Scheme. During this time, pupils accessed a range of educational and social activities that helped them to maintain previously-learned skills and to participate in group learning opportunities in between academic terms.

B. Academic Year 4 (2008 – 2009)

Integration, Intensive Support Team and Home Support Programme

Aims of the Project: The aim of the Integration and Home Support projects implemented in this academic year was to further extend the training that had been provided through the intensive SPEAC Project on a school-wide level. The project aimed to integrate the centre's pupils into classrooms in the main body of the school, to disseminate knowledge and skills in the application of behaviour analytic principles and to provide ongoing parent support to families of children with ASD. The aim was achieved through direct pupil provision, staff training initiatives, and the development and implementation of a Home Support Programme.

Activities of the Project: The provision took three key forms: (1) integration of SPEAC Centre Pupils into their age-appropriate, respective classrooms within the main body of the school (2) development of a Home Support Programme with families and (3) placement of the SPEAC Consultant on the school's Intensive Support Team.

- ⇒ SPEAC funding provided the services of a qualified Consultant Behaviour Analyst to the school. The consultant was on-site at the school two days per week throughout the academic year. SPEAC also provided the services of a qualified Behaviour Analyst to provide supervision of the Home Support Programme. Finally, SPEAC provided additional funds to pay for the additional working hours of Classroom Assistants to facilitate their participation in trainings, class team meetings and the Home Support Programme.
- ⇒ The six pupils who had taken part in the original project transitioned from the self-contained classrooms into age-appropriate classrooms within the main body of the school. The transitions were facilitated by the SPEAC Service, which offered teacher training, advice and support in relation to individual pupil profiles, the writing and implementation of Behaviour Support Plans and the implementation of Individualised Education Plans.
- ⇒ The six pupils who had taken part in the original project also accessed the new Home Support Service, which evolved as a result of the outcomes of the original project. An additional four pupils from the school also availed of the service. The SPEAC Home Supervisor was available for twenty hours per week, throughout the duration of the year; during this time she provided fortnightly visits to all families and conducted regular observations of the pupils in the school setting. The SPEAC Home Supervisor provided individualised intervention plans to all ten families, addressing such needs as toilet training, the reduction of self-injury, the development of independent after-school routines and functional communication. She also corresponded with teachers to facilitate a collaborative approach across settings.
- ⇒ The SPEAC Consultant joined the school's Intensive Support Team, which provided teachers with highly specialised and individualised advice in relation to the support of high-need pupils. The SPEAC Consultant participated in weekly meetings with the Intensive Support Team, and subsequently facilitated classroom-based observations, class team meetings and direct pupil support as and when appropriate.

C. Academic Year 5 (2009 – 2010)

The Intensive Support Team and Home Support Programme

Aims of the Project: The aim of SPEAC's contribution to the Intensive Support Team and the delivery of the Home Support Programme was to continue the dissemination of knowledge and skills in the application of behaviour analytic principles to the school staff and to provide ongoing parent support to families of children with ASD. The aim was achieved through direct pupil provision, staff training initiatives, and the continuation of the Home Support Programme.

Activities of the Project: SPEAC provided the services of a Consultant Behaviour Analyst to school on-site at the school two days per week throughout the academic year. SPEAC also provided the services of a qualified Behaviour Analyst to implement the Home Support Programme. A member of the Tor Bank Staff was given the responsibility of Intensive Support Team Assistant, to facilitate some of the activities of the project. While the latter post was not funded by the SPEAC Charity, it provides evidence for the lasting impact of the project on the ethos of the school.

- ⇒ The SPEAC Consultant provided regular training and support to four class teams in the Primary Department of the school. Through her direct involvement in the planning and delivery of Behaviour Support Plans and Individualised Education Plans, the SPEAC Consultant, (with the support of the IST Assistant), provided meaningful and practical advice to the class team. An emphasis was placed on the nursery classes, where young children with autistic spectrum disorders were given the opportunity to access early intervention.
- ⇒ The SPEAC Consultant provided five class teams in the Primary Department with both theoretical and practical training in the use of Discrete Trial Teaching, a very specific, evidenced-based teaching strategy that has been proven effective in teaching pupils with Autistic Spectrum Disorders. Through the delivery of a competency-based training programme and ongoing support, teachers in the school now have foundation knowledge in the use of Discrete Trial Teaching.
- ⇒ The SPEAC Consultant and SPEAC Home Supervisor provided ongoing professional support to members of the school team that were pursuing professional qualifications in the field of Applied Behaviour Analysis. By providing supervision of the practical fieldwork required by the Behaviour Analyst Certification Board (www.bacb.com), the SPEAC Serviced helped prepare candidates within the school for qualification as Board Certified Behavior Analysts. Some of those candidates are now qualified and working on-site at the school.
- ⇒ The SPEAC Consultant presented alongside Tor Bank Staff at a meeting of the Comenius Programme, which took place to Middletown Centre for Autism. The Comenius Programme's aim is to help you people and educational staff to better understand the range of European cultures, languages and values, and in doing so, enhance the quality and European dimension of teacher training. The audience of Spanish and Dutch educators who participated in this meeting were given information on the unique role of the SPEAC Service at Tor Bank School.
- ⇒ The SPEAC Consultant provided approximately twenty pupils with direct support. This contributed to a large number of reductions in challenging behaviours, including: non-edible foods, self-injury, tantrums during transitions, escape from classrooms, biting staff, spitting, stealing materials from the school, food refusal and aggression. Additionally, a range of positive, meaningful and socially-appropriate behaviours were taught. These included, but were not limited to: tying shoes, riding a bike, waiting appropriately, walking with an adult, requesting attention appropriately, vocal requesting, tolerating new foods, tolerating hair cuts and nail cutting and toilet training.

- ⇒ The SPEAC Home Supervisor provided direct support to ten families of pupils through the Home Support Programme. In doing so, she was able to work with both teachers and families to establish meaningful joint targets for individual pupils. The SPEAC Home Supervisor regularly observed pupils in their classrooms, met with their teachers and classroom assistants and provided fortnightly home visits to families. Through these visits, she provided families with the advice, support and training required to manage challenging behaviours and teach meaningful and appropriate replacement skills.

D. Academic Year 6 (2010- 2011) Primary Years Training and Support

Aims of the Project: The aim of the Early Years and Key Stage 1 Training and Support Project was to further enrich the delivery of evidenced-based teaching by building upon the school and staff capacity, expertise, knowledge and skills. Through the delivery of mentorship, tutoring and support, the SPEAC Project aimed to help teachers better meet the needs of young pupils with ASD and challenging behaviour, to remove their barriers to learning and to promote inclusion within and beyond the school.

Activities of the Project: During the final year of the project, efforts were made to finalise the lasting impact of the project on the school. SPEAC provided the services of a Consultant Behaviour Analyst to school on-site at the school two days per week for the first two terms of the year, and one day per week in the last term of the year. This reduction in provision was due to funding constraints.

- ⇒ The SPEAC Consultant provided direct training and support to four class teams within Tor Bank School, including the Intensive Support Nursery, the Foundation Nursery, the Key Stage One Class and the Key Stage Two Class. The training and support was provided through whole-class observation and assessment, theory-based training sessions, hands on training sessions and an in-class maintenance check. This longitudinal approach ensured that the information provided was applied and practiced. Topics covered included: target setting and teaching, positive approaches to managing challenging behaviour, promoting communication, and using positive reinforcement. The promoting communication training was extended to parents as well, as it was delivered during a Parent Support Group Meeting.
- ⇒ The SPEAC Consultant compiled and provided a Training Manual, which summarises the information and training provided to Tor Bank School over the duration of the programme. The manual provides a useful resource for review of SPEAC's contributions to the school and continued staff development and training.

IV. OUTCOMES OF THE PROJECT

A. Children and Families

Through the centre-based project, six pupils and their families accessed intensive, evidenced-based intervention. Through the latter stages of the project, including participation in the Intensive Support Team, a further twenty pupils accessed direct support in relation to target setting and teaching and behaviour management strategies. Through staff training initiatives, even more pupils accessed an enriched learning environment through the additional knowledge and skills of the staff supporting them.

Through the provision of the Home Support Programme across the two years it was implemented, approximately twenty families accessed home visits. The children of the families that participated ranged in age from three to thirteen. Through this service, families accessed more detailed information on the educational targets and current level of participation of their children in the classroom setting; they also accessed direct training and support in relation to targets of their choice. The individualised targets included the teaching of functional skills and the reduction in challenging behaviour.

A sample of the skills taught includes, but is not limited to: toilet training, transitions into the community, participation in community events, the use of augmentative communication systems, self-management of perseverative behaviour and improved independence within activities of daily living such as eating and dressing. A sample of the challenging behaviours targeted for reduction include: persistent tantrums, self-injury including face-slapping, hand-biting and head-hitting.

Over the course of the six-year project, approximately 40 pupils accessed enriched educational opportunities as a result of the SPEAC Service at Tor Bank School. The project demonstrated the benefits of evidenced-based practice by providing support to as many children as possible, whilst maintaining the quality and integrity of the support. This was done to provide a model for future support structures. For children with autism, severe learning difficulties and challenging behaviours, improved educational opportunities can lead to improved quality of life, increased independence and greater dignity for children and their families.

B. Teachers and Related Staff

Over the course of the six-year project, the teachers, classroom assistants, allied health professionals and related professionals working at Tor Bank School accessed training and support through the SPEAC Service that would have otherwise not been accessible to them. Most notable about the SPEAC Service is the fact that it was delivered in the school, on an ongoing basis, so the link between theory and practice was inherent in the provision. Throughout the course of the project, staff also had regular access to an autism specialist and behaviour analyst on site; this resource resulted in a lasting impact of the training on teacher competencies.

Throughout the duration the SPEAC Service, all teachers and classroom assistants acquired an introductory level understanding of the application of behaviour analytic principles to teacher. Ten teachers and approximately twenty classroom assistants accessed more specific training and developed skills in the following areas: enriching one-to-one learning opportunities through the use of discrete trial teaching, using functional assessment of challenging behaviours, writing and implementing behaviour plans and various methods of recording skill acquisition and behaviour reduction.

The teachers and related staff at Tor Bank School have demonstrated the acquisition of skills in using evidenced-based practice to support pupils. During year four of the project, a Survey Visit from the Education and Training Inspectorate regarding the management and education of children with Severe and Challenging Behaviours suggested that the system used by the school to support such children was exemplary. This feedback was reflective of the ongoing development resulting from the SPEAC Service.

C. School Wide Impacts

The delivery of the SPEAC Service at Tor Bank School, across a six-year period, has resulted in a number of valuable school-wide impacts. First and foremost, the school saw ongoing improvements in staff competencies in the use of evidenced-based practices in the education of children with severe learning difficulties and challenging behaviour, including an informed and consistent approach to monitoring pupil progress. Additionally, the perception and attitude of the staff regarding evidenced-based practice change as a result of increased access to new knowledge and skills. Finally, a range of teaching and learning materials were made available to the school, thus “filling the gap” left by limited funding for necessary resources.

The primary department of the school now uses an informed and consistent approach to recording pupil progress on IEP targets. There is also a school-wide approach to writing and implementing Behaviour Support Plans. Both of these changes were significantly influenced by the SPEAC Service at Tor Bank School. Staff now has a greater awareness of additional educational strategies, such as Discrete Trial Teaching, the Analysis of Verbal Behaviour and Functional Assessment.

Additionally, as the project provided the school staff with regular access to a behaviour analyst on site, the “demystification” of evidenced-based practice, such as Applied Behaviour Analysis, took place. An awareness of and interest in evidenced based-practice grew, and pre-empted initiatives by individuals within the school to seek further training and qualifications. Subsequently, a number of Tor Bank staff participated in or completed a Masters Degree in Applied Behaviour Analysis at the University of Ulster – Coleraine (UUC). Further to this, Tor Bank School is a noted placement for UUC students on the programme. Tor Bank’s Principal, Colm Davis noted:

“The supportive training and continuous professional development process has also helped to reduce staff anxiety and helped to remove the previous ongoing negative myths and misconceptions about ABA. As an everyday practitioner faced with the challenge of coping with quite a diverse range of children with autism, the core components of ABA and structured teaching are now used within my classrooms. The skills learned through the SPEAC Service have proved invaluable in the planning, organisation and implementation of a broad, balanced and relevant curriculum specifically designed to meet individual pupil need.”

The SPEAC Service at Tor Bank School has also resulted in a number of material contributions to the school. The mobile classroom that was used during the first three years of the project was renovated and furnished at SPEAC’s expense. The mobile was later used as a resource centre for staff and parents to access valuable information on supporting pupils; it is currently being used as a nursery classroom. Adjacent to this mobile classroom is a state-of-the-art, purpose-built playground that accommodates children across the ages. The playground, which was funded by the SPEAC Charity, has been, and continues to be available to the whole school.

The teaching materials, toys and equipment that were purchased by SPEAC for the initial project were distributed around the school. Further to this, for the duration of one year, SPEAC provided a monthly stipend to the school for teaching materials and resources; these items have been purchased and are currently used throughout the school. A colour laser printer and supply of ink have also been provided by SPEAC to the nursery classroom; this has a great impact on the teacher's ability to produce and use individualised teaching materials for young children with autistic spectrum disorders.

As a whole, the unique partnership between SPEAC and Tor Bank School has demonstrated the possibility of evidenced-based practice being used inclusively. Doing so has challenged teachers and staff within the school to review and revised the process and methods used to monitor and record progress. Mr Davis comments,

"The school has now revised their process to ensure that greater consistency and continuity prevails in this critical area of teaching and learning. This has enabled staff to identify and plan more effectively the next stage for teaching and learning. The use of the strategies offered by the SPEAC Service has highlighted the importance of greater continuity and understanding among class teams to ensure that consistency is prevalent throughout all aspects of programme delivery and implementation."

V. EVIDENCE FOR OUTCOMES

The SPEAC Centre has followed a rigorous process of evaluation over its first three years. On an operational level, this process involved ongoing and systematic target setting, analysis and evaluation by centre-staff regarding individual pupil progress. On a larger scale, an independent external report was submitted by Professor Patricia Howlin, Professor of Clinical Child Psychology at the Institute of Psychiatry, London, a chartered clinical psychologist, Fellow of the British Psychological Society and joint-editor of the scientific journal: *Autism*. Additionally, the Education and Training Inspectorate (ETI) was commissioned by the Department of Education to monitor and evaluate the provision. The evaluation took account of the standards set out in the Inspectorate's 'Evaluating Provision for Autistic Spectrum Disorders' (2005).

A. Highlights from Professor Howlin's Report

At the request of SPEAC, Professor Howlin agreed to establish an independent evaluation procedure for the progression and performance levels of pupils. This evaluation was carried out in the autumn term of 2007. Quantitative assessment measures were adopted for pupils' general functioning in communication, daily living, socialization skills and maladaptive behaviours according to the Vineland Adaptive Behavior Scales (Second edition; VABS-II; Sparrow, Balla & Cicchetti, 2006). Each child's profile of difficulties was assessed using the Strengths and Difficulties questionnaire (Goodman 1997). Goal Attainment Scaling (GAS) was used to assess the extent to which children reached the specific goals set at the start of the term. Professor Howlin summarised the results of these assessments as follows:

"The children enrolled in the SPEAC unit show the typical pattern of communication, social and behavioural difficulties that is characteristic of autism. All have severe and pervasive difficulties; intellectual and communication skills, although varying from child to child, are significantly below age level."

"Improvements in fundamental areas of deficit (measured by the Vineland SDQ) were not predicted, as these tests are not designed to measure change over brief time periods in children with autism. Nevertheless, on the SDQ, the majority of children showed a small decrease in the severity of behavioural problems over the course of the term, as rated by both teachers and parents."

"Despite the severity of children's difficulties, and the disruption caused by industrial action, ALL the pupils showed improvements in their classroom attainments as measured by the GAS and some achieved far beyond the goals set at the beginning of the term. It is particularly important to note that NO child showed a loss of skills or evidence of regression in school during the assessment period although anecdotal reports from parents indicated that, for some pupils, regression and/or a worsening of behaviour had occurred in previous placement."

"In summary, although no comparison group was involved in this evaluation (this would be needed in order to compare the progress of SPEAC pupils with the progress of children in other settings) the fact that all children attained the specific goals set (and in several instances achieved well beyond the expected level) indicates the success of the very special environment that the SPEAC unit is able to provide."

In summary, for this group of children, the evidence is that the approach developed by Tor Bank School at the SPEAC centre was shown to be highly successful. A copy of this report was given to the ETI in February 2008 for information and as additional evidence for their report.

B. Highlights from the Education and Training Inspectorate Evaluation

The Education and Training Inspectorate carried out an evaluation of the SPEAC self-contained classroom in autumn of 2007. The inspection process involved discussions with the Principal of Tor Bank School, members of the Board of Governors, the Chief Executive Officer of the SEELB and members of the SPEAC Charity. Additionally, centre-based observations were made, along with review of pupil profiles, Individualised Education Plans (IEPs) and IEP measurement systems, and discussions with centre-based staff. An interim report was submitted in September 2007, and the final report was published in March 2008; it is available at www.etini.gov.uk.

In their Interim report, dated September 2007, a number of positive comments about the provision at the SPEAC Centre were noted. These include:

- ⇒ A well organized and implemented time table.
- ⇒ Hard-working teacher, classroom assistants and associated staff.
- ⇒ A collaborative approach used by the class team.
- ⇒ Clarity in the roles of all staff involved and good team work across staff.
- ⇒ A focus on the individual needs of the pupils, with respect to functionality.
- ⇒ Good links with parents, the home environment and related home programmes.
- ⇒ Efficient dealing with episodes of challenging behaviour with minimal impact on other pupils.
- ⇒ Teacher developing in leadership skills within her role.
- ⇒ Good commitment to consistency in approach for the pupils.
- ⇒ Good collection, review and use of data as a point of discussion.

Nevertheless, the report also raised concerns about a lack of group instruction and lack of “flexible” learning opportunities for children. Project management was highlighted as an area for improvement, including improved opportunities for inclusion of the pupils built into the planning process. It was proposed that more cooperation with the ASD team be facilitated, and that allowing pupils access to their services would be recommended. Extending training to other staff was commended. In response to these areas of concern, SPEAC suggested a review of child specific and detailed (often 6 pages long) Individual Education Plans for the pupils in the centre, which illustrated the rationale for chosen learning contexts and approaches. Furthermore, the structured yet flexible approach used in the centre was based upon both long and short term aims for each pupil, which had built in strategies to facilitate access to least intrusive, and indeed, most inclusive educational opportunities for the pupils.

In the final report, submitted by the ETI in March 2008, the inspectorate made the following conclusions:

“There was evidence that notable improvement in the levels of confidence of the teacher and the leader in understanding and implementing ABA methods. The skill, knowledge and growing expertise of the teacher and ABA leader also led to the highly structured and consistent application of the programmes. As a result of this the majority of pupils sustained their improvement in specific behaviours and some of the behavioural outbursts or inappropriate behaviours (self-injury / aggression) diminished over the pilot. The children also made moderate improvement in self-help, daily living, social skills and fine motor activities.”

“The inspection found that the pilot project demonstrated a few strengths, but also important areas for improvement. Even within this small group, the children varied noticeably in their achievements, and in the degree of continuing learning and behaviour difficulties. The pilot programme did not have the same effect on all of the children: the combination of severe learning difficulties, the highly individualistic nature of the children’s autism and the varying types and nature of their challenging behaviours required a more substantial holistic assessment of need than the programme included and consequently, a better choice of supportive strategies to address effectively the children’s unique needs.”

“One of the most significant aspects of the pilot was the collaborative working of the teacher and the ABA class leader. This practice was fundamental to the operational effectiveness of the provision.”

These conclusions seem to be at odds with the review conducted by Professor Howlin. Moreover, the comments on the ETI report seems to underplay the holistic nature of the approach used within the centre-based programme. It is fair to say that the teaching methodology used in the centre remains a controversial intervention with some educational professionals. It is also true that the response to this type of intervention varies from child to child, as is the case for any intervention. However, the quantitative and qualitative evidence, provided by an independent report and teachers and staff, points to a highly successful delivery of teaching and successful outcomes for the children involved in this innovative approach.

C. Comments from Teachers and Staff

Comments were sought from the teachers and staff of Tor Bank School to reflect the impact of the SPEAC Service on various aspects of their own practice. The comments, offered in questionnaire form, reflected a positive and appreciative attitude towards the activities of the service and their resulting benefits. The aspects considered including staff perception of the project as a whole, the impact of the project on their own practice, the impact on their own understanding and perception of Applied Behaviour Analysis and Challenging Behaviours. Additional comments were also welcome. The following is a summary of comments on each.

In relation to the project as a whole, staff feedback was relative to those aspects of the project that directly involved the staff member. Those that were placed in the Self-Contained SPEAC Classroom suggested that the breadth and intensity of the work done had a positive impact on pupils, that might not have been possible had they been placed in the main body of the school, also pointing out the value of consistency in approach across staff within the classroom as a key component. They also appreciated the detailed and ongoing training that was offered through the delivery of an intensive programme across a three-year period. Comments also indicated that the transition of pupils from the self-contained classroom to classrooms within the school was affected by the reduction in staff support outside of the classroom.

Those that accessed the service through the Intensive Support Team expressed an appreciation for the support delivered, and valued the innovations and new strategies offered through this service. Comments also suggested that more pupils within the school should have had access to the service. One staff member commented: *“This was an excellent and very informative initiative for our school, and a groundbreaking programme within the special education provision in Northern Ireland.”*

In relation to the impact of the service on their own practice, staff feedback was often specific to knowledge and skills acquired by the staff member as a direct result of the service. More particularly, staff mentioned a general awareness of the principles of Applied Behaviour Analysis, the development target setting strategies and recording and measurement strategies. Some staff, who acquired a greater understanding of the principles of Applied Behaviour Analysis, were pleased to find that some of the teaching and behaviour management strategies already used were founded in these principles. Staff noted that the ongoing aspect of the training provision was particularly useful, as were direct, competency-based training strategies, such as direct feedback and written appraisals. Further to this, staff also appreciated learning how to self-assess through this process. One staff member commented: *“The training provided by SPEAC was informative and practical . . . and helped to build confidence and motivate staff.”*

In relation to the impact of the service on their understanding and perception of Applied Behaviour Analysis and Challenging Behaviour, staff feedback varied quite significantly. Some staff reflected upon changes in their perception of how they perceive the behaviours of their pupils and the strategies used to manage those behaviours, whilst others reflected upon a better understanding of the strategies that were already being used within the school. One member of staff commented on the value of the behaviour measurement procedures used within behaviour analytic programmes, but expressed concerns about the “intensive” delivery of some programmes. Likewise, common to most comments was the concern that programmes based upon principles of ABA require a level of human and material resources that would not be available in the typical special school classroom. One staff member commented: *“Principles of Applied Behaviour Analysis should be central to all good practice in schools. All professionals can implement a range of these strategies.”*

Finally, the Principal of Tor Bank School, Colm Davis suggested: *“Without a doubt, the SPEAC Service has played a major part in helping Tor Bank to become more “competent leaders” in the practical use of strategies based on ABA within the context of a school. It has also helped the staff within the school to become more effective daily practitioners, and has provide to be a vital enabling tool in helping Tor Bank to achieve its long term goal of becoming a “Centre of Excellence for Autism.”*

D. Comments from Parents

Comments were also sought from parents of children who accessed aspects of the SPEAC Service at Tor Bank School. The comments, offered in either interview or questionnaire, provided valuable insight into the direct impact of the service on the family life of children with autism. Most notably, parents commented upon the significant improvements in their ability to include their child into typical routines and activities of life within a family and community. The following excerpts illustrate this:

“At home, things were going from bad to worse. As my son's behaviour got more extreme, so we became more and more isolated. He controlled everything. He demanded my attention 100% of the time . . . all of our babysitters left because they couldn't cope with his behaviour. I used to dread the end of a video, because he would throw a tantrum when it ended. He at a tiny range of foods and his inflexibility was total. My house was wrecked: couldn't get to the doror without clearing a path through the wreckage. He had no understanding of language, couldn't obey a simple instruction and was still in nappies . . .

The SPEAC Centre has changed our lives. I can't put it to words, the change we have seen in our son. He has come on leaps and bounds. He is toilet trained during the day, and we hope, soon at night. He eats a good selection of foods and drinks from a normal cup. Now we eat together as a family. I can even pop into the shop with him now. Of course, he still needs support, and will always need it, but he is such a different boy, as a result we are a different family."

Evident in the comments from parents, was the impact of the support that extended outside of the school and into the home. Through the ongoing collaboration between home and school during the first stage of the project (the self-contained classroom) and the through the subsequent Home Support Programme, parents found the educational benefits of the SPEAC Service extend from the classroom itself to the home and community.

"The SPEAC Centre is so warm, friendly and welcoming and encourages parents to get involved every step of the way. The approach works best when parents and school work together so that all the skills learnt at school are applied at home and in the community . . . They have broken down all the barriers that we were facing. My son was a little boy who couldn't learn to one who is willing to learn. He is now a happy, contented child."

"What SPEAC have achieved is to help my child learn about the world around him, and what is appropriate in any situation. He's not withdrawn from society any more; he can now be treated just as another child. He can now take his place in the world."

VI. CONSIDERATIONS FOR THE FUTURE

The main aim of the project was to enrich the personal, social and educational development of pupils with autism, through the delivery of quality educational provision that embraces the whole child, inclusive of their families and community. In doing so, the project aimed to demonstrate, by example, the advantages of an autism-specific and evidenced-based approach to educating children with autism, severe learning difficulties, and challenging behaviours. As illustrated by this report, SPEAC's contributions have been instrumental in the development of a collaborative and innovative approach to education at Tor Bank School. It is hoped that the lessons learned through this project can continue to influence the provision at the school, and other partner schools, as the positive aspects of the service model are replicated and expanded.

Efforts should be made to preserve the legacy at Tor Bank School. With the growing numbers of training and qualified members of staff, the use of evidenced-based approaches should continue to infiltrate the teaching methodology across the school. Further to this, autism-specific strategies and support should continue to be developed and implemented, meeting the needs of the growing percentage of children within the school diagnosed with an autistic spectrum disorder. A collaborative approach should continue to be used and partnerships made, taking advantage of internal expertise, outside agencies and governmental departments to enrich the provision.

The SPEAC Charity is proud of the work that has been done, and hope that the insight and accomplishments of the last decade will help to lay the groundwork for the ongoing betterment of educational provision for children with autism in Northern Ireland. As a parent-founded and parent-run organisation, we will continue our pursuit of state-of-the art, progressive, and best-available approaches and facilities to support the needs of the growing numbers of children with autism. Achieving that aim will take us closer to our goal of managing the impact of autism on our children, families, school and community and helping our children lead their lives with the dignity, independence and peace that they deserve.

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