



# ‘Combining an Action Research Approach to Conduct a Functional Behaviour Analysis for a Child With Autism in a Mainstream Secondary School’

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**Abstract:** This is a case study using an action research approach to the systematic gathering of information at an inclusive mainstream secondary school in the United Kingdom. I intend to describe the trial of functional assessment techniques in this school to improve access for students with autism. A continuing action research process of observing, planning, doing and reviewing was implemented to facilitate the use of antecedent behaviour charts and records. I propose to suggest how an effective functional assessment can be used as a tool to provide material towards better informed behaviour management plan for children with autism and so be better supported and included in a mainstream school setting.

I will describe trial this in detail with one student who, although he has made a lot of progress, struggles daily to access mainstream school. Positive feedback was noted throughout the trialing of this support intervention and practical strategies were then formed by the whole school. The implications for the student and school are discussed.

**Keywords:** autism; functional behaviour assessment; action research; antecedent behaviour; behaviour support plan

## 1. INTRODUCTION

Currently at this school there are three children identified as ‘being autistic’ and at various stages in the statutory assessment process. There are also children with ‘autistic traits’ receiving SEN (Special Educational Needs) Support. From observation and monitoring these students appear to have a more noticeable impact on the school in terms of behaviour as they are the students most likely to be discussed at whole school staff meetings and internal student focus meetings. The forthcoming September cohort includes additional children on the autistic spectrum. It is clear from this that this group is becoming significant within this school. Supporting these children includes valid curriculum and environmental modifications, as well behavioural and language and communication adaptations in order for them to be appropriately included in a mainstream setting.

## 2. AUTISM AND CHALLENGING BEHAVIOURS

*“Generally, professionals view autism as a collection of symptoms, generally overlooking the place of those symptoms within the autistic system of functioning and so, too, they miss the language of autism and what it is trying to tell the non-autistic world”.*

**Donna Williams (In Waterhouse: 2000, p. 9).**

Autism is a complex lifelong developmental disorder that is highly variable in its clinical presentation affecting a person's ability to communicate, understand language, play and interact with others (Wing, 1981, 2002). This triad of impairments is neurological in that it is presumed to be present from birth. Autism is described under DSM 5 (2013) and WHO, ICD-10 (1993) classification as symptoms that fall on a continuum, with some individuals showing mild symptoms and others having much more severe symptoms. This spectrum allows clinicians to account for the huge variations in indicators and behaviours from person to person. The term ASCs (autistic spectrum condition) is also used. I will use the term autism or ASCs as the use of the word



'disorder' implies a deficiency whereas 'condition' suggests a set of variables that change across a person's lifetime as their life needs change.

The label of 'problem' or challenging behaviour is often wrongly given simply because people do not know or understand the child or do not know or understand autism. In addition you actually need to understand the individual child's autism and how it affects them. This is a generalisation but staff in a mainstream setting often consider the behaviour of children with autism to be difficult because the impact on lesson delivery and other students can be problematic. This is true only if there has not been sufficient training and/or resources put in place. There are usually very clear reasons for challenging behaviour even if the behaviours are inappropriate to our social boundaries and expectations. The ultimate aim is to teach an acceptable replacement for these behaviours but in order to do this observation and analysis of an individual child in all the school settings is essential. Behaviour may not be the same in all lessons, depending on several factors such as the room itself, the individual staff member, the time of day of the lesson or what the lesson involves, for example an academic or a practical subject, or preferred activity, and many other subtle reasons. The functions of challenging behaviour often serve to gain attention or access to tangible items; escape from demands; act as a reinforcement of a learned pattern, and can be individual eccentric actions that an individual can be immersed (Lancioni et al, 2012). Sometimes it is to gain control over a situation that a child has no control over because they do not understand the setting or their expectations within it.

Volkmar and Wiesner (2004) categorise 'problem' behaviours shown in children with autism into; stereotyped behaviours and agitation; aggression and self-injury; rigidity and perseverative behaviours; hyperactivity and problems with attention and mood problems. Stereotypic or repetitive behaviour is a compulsion for an obsessive, ritualistic action that can include self-injury, echolalia, the imitating of someone else's movements and speech, which are idiosyncratic perseverative responses to sensory stimuli (Bodfish, Symons, Parker, and Lewis, (2000). Such examples are hand-flapping, jumping and rocking, spinning, hand biting and head banging, and also finger flicking and twiddling of objects like string or shoe laces. Carr et al (2003) add pica and tantrums to this. Pica is the consumption of substances with no significant nutritional value such as soil, soap and carpet. Kinnell (1985) investigated pica as a feature of autism and found that 42 of his autistic group studied (60%) had indulged in pica at some stage.

Autism Spectrum Disorders (ASDs) encompass the whole range of intellectual ability. Children with autism learn in a different way, and one of the explanations for this lies in the Gestalt processing where information is processed locally rather than globally. Children with an ASD have difficulty in trying to see the whole picture and frequently misunderstand what is happening around them because they miss details at the cost of focussing on irrelevant details. This is like focusing on individual pieces of a jigsaw without seeing the larger picture, and is termed 'weak central coherence' or 'executive function' (Frith, 2003). Essentially this is a difficulty in processing, storing and/or retrieving information. Impairment of planning, working memory, self-monitoring, regulation of emotion and motivation are affected (Goldberg, Mostofsky, Cutting, Mahone, Astor, Denckla and Landa, 2005; Jolliffe and Baron-Cohen, 1999). Children with autism therefore, are likely to struggle with following a timetable as they cannot forward plan without support to help them work out what is next. They may also take longer transitioning from one classroom to the next, and forget information without visual prompts. Their frustration at being out of control or not being able to communicate their feelings effectively frequently leads to challenging behaviours which are then a barrier to learning.

Another factor, which may cause learning in a different way, is impaired sensory processing. Individuals with autism often perceive a particular environment as threatening by misinterpreting incoming stimuli, causing a constant state of alert. This includes certain sensitivities, for example, to noise, lighting, clothing or food. Firsthand accounts from people with autism describe certain sensations as stressful in ways that prevent learning by being completely preoccupied by them rather than the task at hand (Sainsbury, 2002; Lawson, 1998).

It seems very hard at times to separate what are the autistic behaviours and what are the challenging behaviours. Behaviour difficulties tend to change over time in autism especially when children reach adolescence. These behavioural difficulties often escalate, possibly due to the hormonal and physical changes associated with puberty (Volkmar and Wiesner, 2004), and this complicates decisions about how best to treat behavioural difficulties, particularly in those who



have significant communication problems. It is so difficult to know where to start and which problem needs to be focused upon first, as issues are frequently entwined.

Many children with communication difficulties use challenging behaviour as an inappropriate way of communicating. Challenging behaviours are often a maladaptive form of communication arising when the individual finds more appropriate behaviours unavailable or ineffective (O'Neill and Reichle, 1992). This is what makes the behaviour functional. Generally research and my own experiences have shown that challenging behaviours are not always children 'opting out'; they often occur because the child has no other means to communicate (Carr and Durand, 1985). Grandin (1995) tells us how even verbal children with ASCs sometimes use words incorrectly or ineffectively and cannot always make their wishes known. Bogdashina (2005) discusses how children with autism absorb information differently and think differently. This processing time is essential if children are to interpret and respond appropriately within our 'world'. Each child needs a communication 'repertoire', which might incorporate symbols and the spoken word (Goldstein, 2002). A child may find signing beneficial and supportive alongside verbal, gestured or physical prompts. Different cognitive and perceptual styles affect communication and language development of children with ASCs and Bogdashina (2004) emphasises the need to identify and understand an individual's non-verbal language. Justin, who is high-functioning, often resorts to a default setting saying 'miaow' when he is confused or doesn't know how to respond to a situation. Atypical behaviours are generally associated with impaired language skills and poor quality of social interaction (Murphy et al, 2005). Yun Chin and Bernard-Opitz (2000) believe that persons with autism use language to serve a limited range of communication functions. Poor interpretation of subtle social cues due to limited access to social settings means that they rarely use it for social function.

#### ***What is Functional Behaviour Analysis?***

The analysis of behaviour is vital to understanding why a student acts the way they do. This is especially pertinent when a student has difficulty knowing how to express thoughts and feelings properly in the first instance. When the behaviour is not readily

comprehensible it is useful to observe and record the student in different settings and at different times across the school day.

A student who exhibits seemingly meaningless behaviour may in fact, after observation, be trying to communicate or self-manage. The recordings may reveal a pattern. Also if a student is reacting in an extreme way for a given situation, it may be that a functional behaviour analysis can provide more detailed information regarding how to better support them in terms of sensory issues or tolerance of stimuli. Functional behaviour analysis assists in setting up a system of recordings that can be used to inform an individual education plan (IEP), provision map (PM) or behaviour support plan (BSP) that is developed and reviewed by all staff. Strategies and interventions can then be trialled as a process of observing, planning, doing and reviewing.

As Matson and Williams (2014) describe in their study of the practice of functional assessment, methods most commonly used to collect data are: questionnaires, interviews, observations and analysis. The purpose of this group of techniques is to establish the variables that maintain the behaviour and treatment that flows from this data.

Functional assessment is appropriate because it acknowledges that a person's behaviour is meaningful to them. It recognises that the behaviour serves a purpose for the individual, albeit in a very odd or inappropriate way. People engage in their problem behaviours because over time they have found a way to communicate that works for them and this sometimes becomes entrenched or habitual because of the power of the repetitive nature of autism. This potent information can bring about a better informed intervention plan that is effective and achieves reliable long-term results (Harris, 1995).

FBA can target areas of behaviour and communication. In this study, one of the issues I wanted to focus on was on decreasing one of Justin's inappropriate behaviours, which is that he says 'miaow' and then sits under the table. Apart from this behaviour being unproductive he also draws attention to himself and gets ridiculed. This further compounds the issue and can lead to a further chain of behaviours.

Functional behaviour and autism



Children with autism typically display difficulties across the triad of impairments in any combination and with varying degrees of severity. For this reason selection of intervention can be problematic (Smith, 1999). Jordan (2005) believes that there is no single approach to meeting the diversity of autism, which is characteristic of the syndrome. There is no form of treatment that is effective for all children (Howlin, 1998) and this is further supported by Schreibman (2000) who cites that there is no 'one size fits all' treatment for children with autism.

The unusual nature of development of a child with autism means that there is rarely an even progression and any assessment results may be misleading in terms of the learning and understanding that has been achieved (Glenny, 2005). As a teacher I need to know if an intervention is helping my pupils. I know this from working closely with them but it is helpful to record it so that an information base can be established. In this way strategies or parts of strategies that are working can be passed on. Jordan (1999) offers a simple solution to assessing whether an intervention is working for a pupil by simply establishing a baseline, monitoring progress and making information clear and accessible to everyone.

Practitioners are constantly searching for ways to develop and extend strategies that remediate the social and behavioural limitations of individuals with adaptive deficits such as autism. The field is becoming more influenced by ethical concerns and the need for non-aversive and non-intrusive intervention strategies. This is essential and rightly a move away from physical restraint and onto more proactive methods. Iwata et al (1994) found that functional assessment was extremely effective in identifying the environmental determinants of self-injurious behaviour and in guiding the process of treatment selection on an individual basis. Functional assessment is regularly used to select and develop interventions or behaviour plans for children with developmental disorders (Taylor, 1994; Lundervold and Bourland, 1988).

### Linking the functional analysis to intervention

The functional assessment forms a collection of detailed information from a range of environments and by all the people in contact with a student during their school day. The challenging behaviour is therefore recognised as the result of reaction between environment, needs and characteristics of the individual (McClellan and Walsh, 1995). Outcomes from an active functional assessment should be a clear description of the problem behaviour itself (O'Neill, Horner, Albin, Sprague, Storey and Newton, 1997).

A clearer understanding of the variables that maintain a student's problematic behaviour allows development of a BSP that directly incorporates this information. For example, if a functional analysis identified an attention function, this maintaining variable should be directly addressed. Common approaches for treating attention-maintained behaviour include planned ignoring of the problem behaviour (Ducharme and Van Houten, 1994), providing unrestricted attention to the student throughout the day (Wilder & Carr, 1998), and teaching the student more appropriate ways to obtain attention (Durand, 1999).

### **3. METHODOLOGY**

According to Whitehead a methodology is not only a collection of methods used in the research but is distinguished by a philosophical understanding of the principles that organise the 'how of the enquiry' (2012a). The principles that organised the 'how' of this enquiry were grounded in theory through an action research approach.

Action research can be seen as a systematic, reflective study of one's actions, and the effects of these actions, in a workplace which in this case is the organisational context of a school. Action research reinforces practice and life experiences with philosophy, policymaking and theory. It enables the 'web of relationships, actions, influences, role models and experiences' (Reason and Bradbury, 2008, p.16) to strengthen the action researcher's practice. So action research allows for the process of self-reflection which Leith and Day (2000: 189) identify as the '*engine for the action research process*' and it is this element which is



the tool for practical use in this study, the tool that allows us to support our students with their behaviour.

It is the cyclical nature of action research which allows a dynamic and practical method to exist in the school setting with a child with autism. As we observe, plan, do and review we work alongside children to support constantly and adapt and improve teaching. The focus of my action research is to use the functional behaviour process as a tool to identify how to better support the behaviours of children with autism at this school. My hypothesis based on experience in this field, is that behaviours are often caused by environmental or sensory issues that are additional to deficits in the recognised triad of impairments and which are not always acknowledged.

Action research describes practice that helps to improve theory which in turn helps to improve practice which in this case is more effective autism practice and better management techniques for students and for staff. This approach very much lends itself to the changing cyclical nature of the school setting. The learning-oriented and person-centred process infers a review element to the study as it will become a continuing cycle of evaluation (Kember, 2000). There will need to be room for manageable review and evaluation as new ideas are trialled and new BSPs written. Action research provides a trail of knowledge from and through one's practice by working through a series of reflective stages that facilitate the development of open-minded problem solving (Bereiter & Scardamalia, 1993), which again slot into a school-wide system student tracking and monitoring.

The phenomenological approach is concerned with the need to discover details and emphasise the importance of situational settings such as within an organisation which in this case is a school. This naturalistic methodology tends to focus more on the social interpretation of phenomena and attempts to understand 'what' is happening and 'why'. This naturalistic approach uses qualitative methods in order to establish general rules and is a logical approach assuming that objectivity, and reliability exists. Situationally accountable methodology offers rigour and will use any similarities and differences between data sources to

increase the accuracy of the information (Cohen, Manion and Morrison, 2007).

The overall flexible design with mixed methods and multiple sources of data provided both qualitative and quantitative information which in combination offer explorative and experimental treatment of data, providing a better understanding of research problems than either approach on its own (Cryer, 2006). This is in keeping with Gaventa and Cornwall (2001) who state that action research recognises differing ways of knowing, multiple potential sources of knowledge and multiple forms of knowledge itself.

A methodology 'is a broad array of ideas, frameworks, concepts and theories which surround the use of various methods or techniques employed to generate data' (Hitchcock and Hughes 1989:20) or a 'philosophical framework which guides research activity' (Van Manen 1990). Kaplan (1964) continues to say that methodology is a description or a justification of the processes, but not the methods of data collection themselves. The process of actually collecting data using such tools as interviews, observation or questionnaires sits within a specific methodology, and for this thesis the majority of the methodological choice has been qualitative. Some quantitative data has been used, and I have combined the two methodologies into an overall narrative.

### ***The Participant***

This student is named Justin to maintain his anonymity. Justin is a twelve-year old boy with a statement of Asperger Syndrome (AS) who is highly anxious, sleeps erratically and desperately wants to be part of the school. He does not fully understand his autism or how it affects him as in his early years it was not explained so he needed to learn ways to better self-manage the behaviours that were occurring regularly and preventing him from learning. Justin has many interests including wildlife, gemstones and anything scientific. He has many friends and it is this has helped him to learn what is socially acceptable in school.

Justin has been out of school for one year having been previously excluded from two primary schools so had little experience of being in school and what this involved. Behaviours were frequent and at times there were quite severe outbursts. We needed to see



beyond the behaviour and allow this student to feel accepted and part of our school community. Several autism-specific interventions were put in place including a sensory integration programme, a social skills group and social stories (Gray, 2000) which, are beyond the remit of this article, but important to note.

I started this investigation with a review of Justin's end of year subject reports and assessments. National curriculum levels showed that he was not achieving as highly in all of his subjects in comparison with science. However, Justin gained the highest score in his end of year science test which reflects the patchy way in which children with autism progress (Fletcher-Campbell, 2003). They tend not to develop skills in a linear manner but rather in clusters of skill domains. Flexibility and resourcefulness is required by teachers of pupils with ASCs as they need to be familiar with a wide range of interventions.

When I used the previous recording system, I was aware that it aimed to record specific data concerning the amount and types of behaviour that Justin was exhibiting at that time in his life. It was biased towards merely providing quantitative data that measured how many times a in a week a behaviour was displayed and what it involved. This did not seek to explain 'why'. Basic behavioural data was recorded but it was not detailed enough to explain what was really happening for Justin and why. Without this supplementary material I was unable to accurately design a thorough BSP.

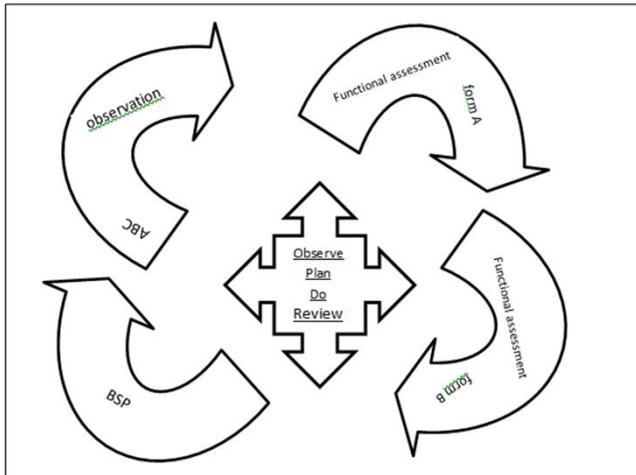
With this set of material and tools to consider I aimed to use the FBA approach to design procedures for helping to prevent Justin's difficult behaviour in the first instance, but also to help staff respond effectively and consistently to that behaviour if it does occur (Horner and Carr, 1997). Functional assessment can reliably identify reinforcing consequences of the target behaviour, antecedent conditions that evoke a targeted behaviour, as well as more appropriate but functionally equivalent alternatives to the target behaviour (Lennox and Miltenberger, 1989; Whitaker and Hirst, 2002). Gains may not be immediately obvious but over a longer period with regular planning and reviews the positives, will become noticeable and valuable.

Lennox and Miltenberger (1989) suggest looking for consistency and patterns among informants' reports and between assessment instruments. All of this information is combined so that a hypothesis is created that seeks to establish the variables that predict and maintain the behaviour. In particular for Justin this meant the main targeted behaviour of 'shutting down' under the table. For other students, their specific needs were taken into consideration and target behaviours were identified in their BSPs.

A direct method is a data collection system that documents occurrences of the problem behaviour across the student's day. Ellingson et al (1999) state that direct observation is the most effective tool. The foundation of behavioural procedures is to systematically observe the person in typical daily routines which must be done in such a way that does not interfere with normal events. Collecting information in this way allows observers an opportunity to discover whether a pattern exists, confirming and building on information obtained from indirect informant methods. All students were randomly observed across lessons in order to identify details, such as the times the students were calm and able to access the curriculum or the times when they were not. Horner and Carr (1997) believe that functional assessment should be an on-going process, which works well alongside an action research approach which in due course aims to change responses through a change in practice from the inside via this cycle of reflection and response.

I used a set of classroom observations to gather evidence of when behaviours happen why and how they occur. This is in the form of an ABC recording sheet, the results of which are shown in the data collection. I then analysed more thoroughly what the behaviours meant through further detailed descriptions on the Checklist A sheet obtained from observations. The follow-up sheet Checklist B was used to pinpoint predictors of behaviours and what maintains them. Examples of these sheets are shown in the data collection. The FBA took place over four-months and was used to collect data for five students. Each student had an individualised BSP, which was developed through this person-centred approach to recording and analysing.

A BSP was designed for each identified child through this FBA route. I will use one set of student data to describe the process I intend to put in place and the resulting behaviour support plan. The flow chart below demonstrates the process I used in order to design the BSP. A BSP was designed for each student.

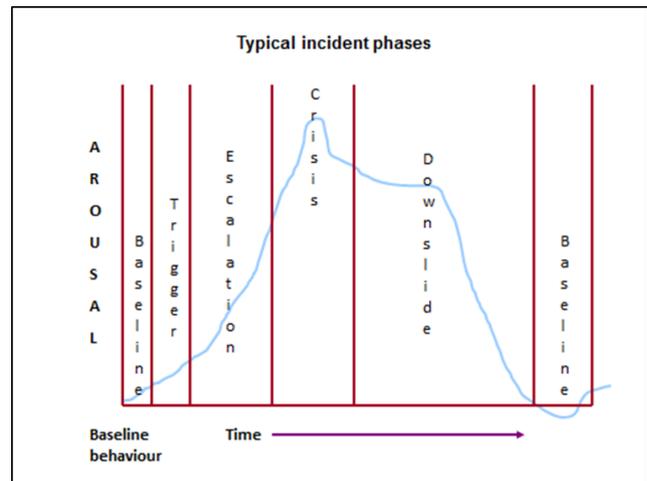


**Figure1. Flow chat to demonstrate the cyclical nature of how the BSP was designed through observing, planning, implementing and reviewing**

For this reason new recording sheets were designed to provide a bigger picture for Justin’s behaviours the collated data from which are summarised in the data collection later.

**4.DATA COLLECTION**

With improved understanding, effective behaviour support can be managed that can be used with confidence throughout the school. The new BSP incorporates the assault cycle according to Kaplan and Wheeler (1983). See diagram. The baseline establishes what normal behaviour is for a given individual. The trigger is the cause of a particular behaviour identified by the FBA. Staff can prevent a behaviour becoming an incident if the proactive strategies are followed up to this point. During the escalation phase, agitation increases which leads to the crisis and actual meltdown unless supported. Interventions become reactive only if proactive measures have been unsuccessful. The downslide or calming phase considers what has happened as a result of the reactive interventions being successful until there is a return to normal behaviour for that person.



**Figure 2. Kaplan and Wheeler’s (1983) assault cycle showing the typical phases of a behaviour or an incident.**

It is essential for a school team to understand the sequence of stages of arousal as this provides the basis for effective action (Harris and Hewitt, 1996). The emphasis of any behavioural approach is to manage the triggers and prevent escalation. In the instance where there is a further escalation, staff will then know safely and securely what to do. In practice this means being non-confrontational and responding positively to realistic student requests or needs. Each time the process is completed something else on the BSP is changed, a methodology which reflects the changing often recurring features of autism.

**5. DISCUSSION**

Behavioural data can be summarised and used to evaluate the effectiveness of a plan and to generally guide the decision-making process related to the student behaviour and intervention design. Potter and Whittaker (2001) highlight the need for detailed record-keeping and information on child progress by collecting and regularly analysing. Observation puts emphasis on the generation of knowledge and evaluation uses the knowledge to inform decisions (Mertens and McLaughlin, 2004). In this case it is the generation of knowledge through observation and recording, the planning of an intervention, the subsequent implementation and the cyclical revision of it. Table 1 presents collated data that demonstrates the start of this process.



There is now a recording trail of individual student behaviour. This is in keeping with Gaventa and Cornwall (2001) who state that action research recognises differing ways of knowing, multiple potential sources of knowledge and multiple forms of knowledge itself. Children with autism often demonstrate persistent behaviours or those which seemingly emerge and disappear. It is clear from having followed this process from observation, analysis and implementation that a cyclical form of recording and reviewing must be executed and this was well-matched to the nature of perseverative autistic behaviours.

A closer examination of triggers for Justin's behaviours are summarised in Table 2. Some incidents were caused by his lack of confidence in that he has a huge fear of failure and even though he is very clever he feels unable to complete work. This was due to him deciding that he can't do the work thereby avoiding

doing it completely 'because it is too hard'. In addition to this concept, Justin frequently knows that he can do the current work but adopts the scenario that the next part 'may' be even harder and this 'may' lead to even more challenging tasks and questions. From conversations and observations with Justin, he feels it is better to self-sabotage the whole situation than actually fail by trying.

Table 2 is a summary of the categories that demonstrate factors Justin struggles with, such as too many people in the classroom or schoolwork not being sufficiently adapted. The actual recorded factors are highlighted in bold. A poor night's sleep is often a contributing factor to Justin's behaviour and state of mind during the school day. Sleep concerns feature highly in the recordings as he has a poor night-time routine and is awake most of the night. Because he cannot sleep he plays computer games, which exasperate the issues and are a vicious circle.

**Table 1:** Detailed information about Justin's behaviours from ABC form. This table shows specific details including location of behaviour, time of day, length of behaviour and what led up to the behaviours occurring in the first place .

| <b>Lesson:</b>           | <b>Antecedent:</b>  | <b>Behaviour:</b>   | <b>Consequence:</b>                                       |
|--------------------------|---|---|---|
| Maths                    | Activities involving probability  | Justin didn't understand the task and began to 'miaow'. This led to breaking his pen, tearing up his worksheet + the replacement worksheet.             | Shut-down; no work completed.                             |
| <b>Date:</b><br>19/5/14  | Arrived to school asleep in the car<br><br>Unable to focus and had missed the previous lesson due to an incident. | Justin then sat under the table.  | Lesson disrupted.   |
| <b>Setting:</b> In class |   |   |   |
| <b>Start:</b> 9:00       |   |   |   |
| <b>Finish:</b><br>9:15   |   |   |   |
| <b>Observer:</b><br>**   |   |   |   |
| English                  | Spelling test   | Justin began to miaow when he started paper task. This was sustained on and off for 5 mins. He broke his pen and threw items across the room at others. | Justin was given time out, space and non-verbal response. |
| <b>Setting:</b> In class | Justin had a cold and couldn't concentrate on the task  | He was asked whether he wanted to leave the room or calm in the room.   | No work completed   |
| <b>Date:</b><br>3/6/14   | He was fatigued from trying to concentrate all day  | He opted for sitting under the table.   | Lesson disrupted.   |
| <b>Start:</b> 2:00       |   |   |   |
| <b>Finish:</b><br>2:25   |   |   |   |



**Table 2:** Overview of more specific stress factors for Justin. Whereas table one shows when and where Justin’s incidents take place, this data collection shows the reasons why  
Taken from Checklist A.

| <i>Medical/Emotional</i> | <i>Environmental</i> | <i>Social/ Interactional</i> | <i>Curricular/ Instructional</i> | <i>Personal</i>            |
|--------------------------|----------------------|------------------------------|----------------------------------|----------------------------|
| Hunger/Thirst            | <b>Auditory</b>      | Social expectations          | <b>Task difficulty</b>           | <b>Choice-making</b>       |
| Toilet                   | Visual               | Opportunity with peers       | Task length                      | Communication              |
| <b>Health</b>            | <b>Transition</b>    | Teacher/staff                | Pace                             | <b>Sensory dysfunction</b> |
| Medication               | Predictability       | Proximity                    | Delivery of instruction          | Routine dependent          |
| Diet                     | <b>Class Size</b>    | <b>Behaviour of peers</b>    | Level of assistance              | <b>Fear of failure</b>     |
| <b>Sleep</b>             | Seating              | Social Skills                | <b>Meaningful</b>                | <b>Coping skills</b>       |
| Pain                     | <b>Temperature</b>   | Change of Staff              | <b>Adaptation of material</b>    | Clothing                   |

**Table 3:** The consequences that appear most likely to maintain Justin’s problem behaviour/s are shown here. Table two shows the reasons why Justin behaves the way he does whilst this data demonstrates what makes the behaviour habitual. Taken from Checklist B.

| <b>Things that are likely to be obtained</b>   | <b>Things that are likely to be avoided or escaped from</b>   |
|--|---|
| <b>adult attention</b> peer attention<br>preferred activity                      objects<br><br>Other: _____ | <b>hard tasks</b> reprimands<br>peer negatives                                      physical effort<br>adult attention <b>fear of failure</b><br><br>Other: _____ |

We found that Justin got upset when he saw other students misbehaving or talking when they shouldn’t be. He sees things in black and white and feels that everyone should follow the rules when the teacher says silent work. He does not cope well with moving from one classroom to the next between lessons, especially when the corridors are busy. His auditory issues tended to centre on the pitch and tone of a teacher’s speech patterns. He largely can’t cope with high voices or a raised voice as he can’t always differentiate between a raised ‘cross’ voice and a raised ‘excited’ voice that is used to emphasise a point. Justin is often cold and gets ill frequently which impacts on his ability to focus and much of this is due to sensory difficulties.

The ongoing planning and reviewing process meant that once we identified all the relevant factors we could choose interventions to better meet Justin’s needs as well as the other children with autism. This approach assumes a continuous assessment process (Collis and Lacey, 1996; Schreibman, 2000).

Details pinpointed by the ABC observations showed that Justin became anxious when, for example, he was asked to make a choice, complete a paper-based

task or simply as he became overloaded across the day. It was recognised that often disruptive behaviour was preceded by random words being repeated or more usually by him ‘miaowing’. The ‘miaowing’ was the first sign of a chain of behaviours indicating his stress, that if left unaddressed would lead to Justin breaking pens and tearing up his papers and ending with hiding under the table to block-out the work and ultimately shutdown because he could not cope.

In a more in-depth analysis to specify exactly what happens for Justin the following features were apparent across all in the next stage of this investigative process. Table 1 provides an example of a completed ABC form, demonstrating more information regarding the setting leading up to behaviour as well as the following impact.

In terms of now actually designing a behaviour plan, the easy option would be to ensure everything is low-key and easy for Justin to complete. This would keep Justin calm but also creates a false environment for him. Interestingly Justin is extremely sensitive towards tasks that are too easy and makes statements like ‘I’m *not a baby*; *this work is far too easy*’ or ‘*You have got to be*



*joking, this work is ridiculous*'. Adapting tasks, following a more structured visual schedule and reward system will go some way to address coping skills across the timetable. Consequences should involve a planned response to the problem behaviour that will make sense to the individual. Consistency is created by having an agreed procedure across environments and with different adults written in detail in the behaviour plan.

Feedback pointed towards sensory dysfunction or impairment. It was believed that Justin may have learnt that having a tantrum can vent energy, anger and tension and, as has been reported in research by Pagliano (1999), also release pain-relieving chemicals especially when self-harming. All of these can combine to give distraction from the original cause of the frustration and a 'buzz'. If this is the case, then Justin needed a programme that combined self-management skills, increased understanding of what was happening around him and regular appropriate sensory stimulation to decrease the need for such outbursts (Lee, 2004; Dunn, 1999). As I am trained in sensory integration I developed a sensory profile that supported a 'sensory' hypothesis for Justin that will be part of his daily routine to support his sensory profile. The aim is to use this regularly so that he can maintain a sense of equilibrium that in turn will help to remove barriers to his learning. This is part of a proactive strategy as described on his BSP. The functional assessment highlights areas for more than one strategy to be used for Justin involving input from a range of agencies. Of course each student will have their personal version of their BSP.

It is especially important that we continue to monitor his progress and revisit the functional assessment with this in mind, as we need to know which parts of the behaviour plan are working, or not, over a longer period of time and what the best combination of interventions are for him.

By being proactive we can move things forward for students with autism and give them empowerment to deal with their difficulties themselves. Whitaker (2001) says that individuals need to feel in control without their behaviour being controlling. Before learning can occur adults must try to ensure that children with autism are actively engaged with their environment (Potter and Whitaker, 2001). Environmental interventions can often produce an immediate reduction in problem behaviours. Peck (1985) found that students with autism spontaneously communicated more when they were given greater control over aspects of their environments. In the future it will be useful to conduct a whole school audit and determine what needs to be implemented in

order to make the building and curriculum more autism-friendly.

There are many limitations on the methods in this study used mainly because this has been a very localised study, taking place in a small school within a short time scale. A further step in this action research process would be to review the BSP document in a year's time to consider the impact on students and staff alike.

## 6. CONCLUSION

In my experience challenging behaviour in children with autism achieves an outcome that is rewarding or purposeful in some way; cause and effect; control; therapeutic; self-regulation or communication. I believe an interactive approach that is multidisciplinary to be most effective because it enables students to be confident in confronting their own problems. Students can become more in-charge of their behaviour by developing understanding and making active decisions that give purpose to activities. Interactive approaches view the individual as an active learner who takes control of their thinking processes, communication and social development.

An individual behaviour support plan, which documents supports and strategies based on students' unique and individual characteristics, will benefit students with the challenges that their behaviour presents. The development of a support plan should be a collaborative effort between lead SEN teacher or SENCO and school staff and it is important that parents are then aware of this plan. Discussion needs to take place with parents so that they are supportive of the proactive strategies, pre-planned consequences and crisis management plan.

Action researchers examine their interactions and relationships in a social setting seeking opportunities for improvement. As creators and participants, they work with their colleagues to propose new courses of action that help their specific 'community' to improve work practices. In this way I have been able to use data collected from observations to share with colleagues. This resulted in a reflective phase during which I could formulate new plans for action during the next cycle of evaluation. Regular review of the behaviour support plan would now take place.

Any of the students may easily replace their behaviours with something else in six months' or even six weeks' time so behaviour plans and strategies must be regularly revised and be accessible. On-going data collection allows for an efficient way of monitoring



changes in behaviours and possible changes in functions of behaviour, or new antecedents to problem behaviour and the factors maintaining them. This approach assumes a continuous assessment process. The whole school team needs perseverance to see different strategies through even if they initially appear to fail.

This study has led me along the action research path of improving my learning through my practice that facilitates the development of progressive problem solving (Bereiter & Scardamalia, 1993). This has had a direct impact on my professional work as I have been able to apply new methods. My professional work has allowed me to conduct research and that has evolved and become directly applicable to practice. Over time, I believe that I will develop a deep understanding of the ways in which a variety of social and environmental forces interact to create complex patterns for children with autism. Since these forces are dynamic, action research is a process of living one's theory into practice (McNiff & Whitehead, 2010). Being able to apply this into my teaching and then cascade training to other staff is why the study has been so meaningful and relevant.

There are ways to help a person with autism to be more included in a mainstream setting but this remains a challenge. Our aim as professionals working with children with autism is not to try to make them the same as children without autism, but to enable the development of lifelong self-management skills that can be performed as independently as possible. We need to remove the barriers to learning. A reduction in difficult behaviours will increase opportunities and improve quality of life through opportunity and access. Children with autism will become adults with autism, so will need to have the tools to manage their own behaviours in a range of environments that will change with time.

It is essential that these children have individualised programmes that meet their needs and to train staff who know what the skills are that will enable them to function better. These new skills have to be taught consistently and repetitively across settings with the view to preventing issues in the first place rather than being reactionary. If as a last resort a targeted response is required from the BSP, everyone needs to follow it consistently. New skills should be about learning what to do in a crisis rather than what not to do, so providing a child with functionally equivalent and related skills is essential. This helps a child cope better and be more likely to tolerate things that make them anxious. By conducting a more detailed functional assessment we can do more to understand and so help an individual in crisis who reacts to a situation that they do not understand.

The behaviour support plan will not allow for exact replication because it is personalised but could be used as a template with another student or in another school according to their setting. The process used to get to the BSP can be utilised as a practical method for use by other professionals

Mainstream schools need to become still more competent at devising an autism-friendly environment conducive to support such factors as communication, sensory and environmental needs. A follow-up study describing how this BSP was reviewed and what amendments needed to be made would be interesting. Also how the training of staff around using the BSP would be informative. I felt better informed after conducting the functional assessment and better able to understand the students. Creating a recording system has increased my confidence to develop better quality information for use in a behaviour support plan and how to disseminate now this across the school. I believe this will result in the development of a positive school climate and will also have constructive effects on teacher and student behaviour.

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