Facing the challenge and shaping the future for primary and secondary aged students with Foetal Alcohol Spectrum Disorders (FAS-eD Project)

PROJECT REPORT

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- Professor Barry Carpenter, OBE, Associate Director (SEN) and Director, Complex Learning Difficulties and Disabilities Project (Project Director), Specialist Schools and Academies Trust
- Professor Hilary Constable, Educational Consultant
- Ms Jo Egerton, Project Research Officer, Complex Learning Difficulties and Disabilities Project, Specialist Schools and Academies Trust (Project Research Associate)
- Ms Susan Fleisher, Executive Director, NOFAS-UK and parent of a young woman with FAS
- Dr Raja Mukherjee, Consultant Psychiatrist, Surrey and Borders Partnership NHS Foundation Trust.

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This summary is intended to give a brief overview of this research project and Foetal Alcohol Spectrum Disorders (FASD). It will introduce the rationale for the project, the salient issues around Foetal Alcohol Spectrum Disorders, and give an overview of outcomes and recommendations. A more detailed methodology can be found in the full report, and the project literature review is available online at www.nofas-uk.org.

**What Are Foetal Alcohol Spectrum Disorders?**

Foetal Alcohol Spectrum Disorders (FASD) operates as an educational umbrella term to represent the range of effects caused by prenatal alcohol exposure. These include learning difficulties and physical disabilities. FASD encompasses the following diagnostic terms:

- Foetal Alcohol Syndrome (FAS)
- Partial Foetal Alcohol Syndrome (pFAS)
- Alcohol-Related Neurodevelopmental Disorder (ARND)
- Alcohol-Related Birth Defects (ARBD).

The complexity of the condition may be increased by any overlapping and co-existing conditions such as Attention Deficit Hyperactivity Disorder (ADHD), Autistic Spectrum Disorder (ASD), Oppositional Defiance Disorder (ODD), Reactive Attachment Disorder (RAD), Sensory Integration Disorder (SID), Tourette’s Syndrome, mental health issues (all of which may be present in one individual student).

Other compounding factors for children with FASD may include their personal family history (e.g. multiple foster and/or adoptive placements), isolation and loneliness borne from being the only student in a school with this condition, lack of knowledge about the condition within the education, health and social care systems and society in general, barriers to accurate diagnosis and the hidden nature of students’ difficulties.

Secondary disabilities, such as poor mental health and insufficient engagement with the curriculum, can result from lack of appropriate diagnosis, sensitive support and interventions in the early years and primary age.
Research Project Rationale

Diagnosis is controversial, and under diagnosis is believed to be common, which suggests that there are more students in schools with FASD than are currently recorded. In addition, there is a paucity of knowledge in education, health and social services about FASD and how best to support students and families affected. There are currently no UK government guidelines or training available for the education workforce in connection with the support and education of students with FASD.

I am surprised to have come across so many people who have no awareness of it (FASD), didn’t seem to understand the impact it has on all aspects of children’s development, but particularly on the way that they learn. We have talked to Educational Psychologists and they’ve often said that we probably know more than them and sometimes that’s a little bit worrying.” (Parent interview)

“We know our child and we know bits about schools. We assumed that there would be people who knew about people in our child’s situation and which school would be best, which would give us a clearer idea about it. It’s a difficult decision and we need first hand experience to draw on.” (Parent interview)

There was a need, therefore, to identify the issues and challenges faced by students with FASD and those working with them in UK educational settings, as well as to record solutions developed by teachers in supporting these students and their families.

Aims of the Project

The aims of this research project were to:

- Develop teaching and learning frameworks for teachers and other professionals involved in the education and support of students with FASD.
- Share good practice across the education workforce.
- Investigate the educational implications of FASD in a UK context and their relevance to Initial Teacher Training and Continuing Professional Development.
- Raise appreciation among teachers for the need of close partnership with families in delivering effective education for these children.
The frameworks developed from this project aim to ensure that students with FASD can be included alongside their peers in the classroom, in any educational setting. They were trialled by the 9 teachers working with the project researcher, as well as a number of other education and health professionals.

Who Was Involved in the Research Project?
The research team included a project director, a lead researcher and a research associate supported and advised by a research steering group. In each of 9 schools, the project researcher worked alongside a teacher (the ‘teacher researcher’) and their class team, who were supporting a student with a confirmed diagnosis of FASD. The views of trainee teachers from the University of Worcester and the University of Chester were also sought.

Methodology Overview
The project was carried out using a qualitative case study and action research approach. Data collection included:

- Establishing the student voice: achieved by using a multi-method approach of ‘listening’ to children by talking to them, their parents and teachers
- Observing students and teachers in the classroom in order to identify effective teaching and learning strategies
- Observing and recording the challenges for inclusion.

Data collected from engagement observations, and as a result of talking to and observing students and teachers, and talking to parents, have been synthesised into a series of illustrative case studies. Data from interviews were also subject to categorical content analysis.

Project Participants
The nine students (six female and three male) with FAS or pFAS involved in the projects, their parents and the schools were purposely selected. The students were aged between six and 19 years, and were educated in a range of settings including primary and secondary mainstream, and special schools. In addition to their primary diagnosis, five had additional diagnosed conditions. Two lived with birth parents, while the remaining students were adopted, one within the wider birth family. Education staff supporting the students, and the students’ parents (birth and adoptive) have
contributed to the research.

Since parents are children’s first and most enduring educators, it was appropriate that parents were valued as co-educators of their children and their views on their child’s educational experiences recorded as well as those of students themselves, and of the range of professionals working with them.

Main Findings of the Research Project

Students with FASD experience a range of developmental, learning, behavioural, social, emotional and sensory difficulties which create barriers to learning. These not only have an impact within the educational context, but also on the subsequent acquisition of crucial life skills (e.g. telling the time; self-organisation; etc.) However, it is important to set the learning difficulties of children with FASD in the context of their strengths. These strengths will become the foundations on which to develop personalised curricula, to encourage and develop further strengths, and build emotional resilience. Therefore this overview of findings will begin with the children’s strengths, before summarising their difficulties.

Educational Strengths of Students with FASD

- Students with FASD are often ambitious and have a range of practical strengths which are useful in their educational careers and throughout life.
- Many are articulate and have engaging personalities. They enjoy being with other people.
- Many have learning strengths around Literacy and practical subjects, such as Art, Performing Arts, Sport, and Technologies, although they often have difficulties with comprehension,
- While they have working/short-term memory difficulties, rote learning and long-term memory can be strengths.

Educational Difficulties of Students with FASD

Developmental Difficulties

- Significant delays in achieving developmental milestones such as toileting and hygiene skills, in some cases beyond the primary years.

Medical Difficulties

- Medical and health related difficulties including organ damage, poor sleep patterns, eating and
dietary difficulties, small stature, vision and hearing impairments.

**Learning Difficulties**
- Understanding cause and effect
- Difficulty in understanding mathematical concepts, such as time, understanding money
- Cognitive difficulties, including poor short term memory, and poor concentration.
- Frontal lobe damage to the brain, which is associated with FASD, results in impaired executive functioning leading to deficits, such as impaired ability to organise, plan, understand consequences, maintain and shift attention, and process and memorise data. This has an impact on independence in a range of situations. Executive functioning impacts on daily living skills.

**Behavioural Difficulties**
- Behavioural difficulties, including hyperactivity, inattention, aggression, obsessions with people and objects, agitation, can cause anxiety and frustration for students as well as parents and teachers. These difficulties, whilst often seen as behavioural issues, can also be related to sensory processing disorders requiring occupational therapy input.
- Teaching and Learning Frameworks resulting from this project recommend that teachers seek the assistance of an Occupational Therapist in order that a Sensory Profile can be completed and the students needs correctly addressed:

  “In Science we’re hitting difficulties because of her impulsivity around behaviour, she’s very drawn to the apparatus, she likes anything that’s very pretty and sparkly and if you’ve got colourful flames and splints and nice things bubbling in jars that’s a temptation for her, she wants to get in there with her hands.” (Teacher in a Secondary School)

**Social Difficulties**
- Difficulty acquiring appropriate social and emotional skills, which impacted on relationships, friendships, and any activity which requires an understanding of the state of mind of others and predicting how this might affect their actions.
• Understanding boundaries: Students can be frustrated by their own behaviour, but seemingly unable to control it, leading to challenges in self esteem and peer relationships:

“She’s not always aware of the impact of her behaviours on others and that upsets her, because after the event when people explain to her, she’s very apologetic. She doesn’t like to be like that but at the same time, she really cannot control it. This is the paradox, she’s aware that she can’t control herself and that’s frustrating for her.” (Teacher in a Secondary School)

• Evidence from this project and the wider context suggests that, for students with FASD, the current focus in schools on assessing and addressing their cognitive needs omits full recognition of the impact of students’ social and emotional needs on their ability to learn and to function appropriately and effectively within their communities.

**Emotional Difficulties**

• The need to rely on external prompts from adults can result in low self esteem and frustration
• Students begin to identify the differences between themselves and peers (and vice versa) even in special school settings, again resulting in low self esteem.
• Secondary disabilities, such as mental health problems, disrupted school experience, trouble with the law, confinement, inappropriate sexual behaviour, problems with independent living and employment can result from a lack of identification/support when students are at primary age.
• Teachers and the professionals who support children with FASD in the classroom will require an understanding of the compounding factors associated with the condition, and ensure continuing multidisciplinary assessment that is necessary to allow identification of secondary disabilities so proactive action can be taken to ameliorate the effects. The importance of working closely with families and “putting families at the centre” of their child’s educational journey (David Braybrook 2010) in these circumstances cannot be overestimated.

**Transition**

• Parents and teachers share concern over the social and emotional vulnerability as students with FASD move through the education system and into adult life:
“I’m a bit apprehensive, not sure how he’s going to manage and obviously there are certain restrictions he has with having to have 1:1 support ... there are certain grand ideas he has and things he’d like to do, some of them are totally unrealistic.” (Parent interview)

“It’s that sort of sickening feel about what’s going to happen next that I get.” (Parent interview)

- Students with FASD will continue to need provision and support throughout their adult life, which ideally include:
  - ongoing multi-disciplinary assessment leading to appropriate and sensitive support packages
  - A commitment to maximising appropriate levels of independence
  - The provision of supported/sheltered living accommodation with access to assistance with daily living skills
  - Supported work and leisure opportunities.

- Schools can support families in finding appropriate and suitable placement for students and providing information to future placement about how best to support the student.

**Implications for Learning**
- There is a necessity for extrinsic motivation to learn skills or complete tasks such as life skills, hygiene routines, and school based tasks, particularly in secondary aged students, requiring repetitive reminders and re-focussing from adults.

**Feedback from Teachers**
All teachers reported that involvement in this project has been a useful and positive experience for their schools and that their professional development has benefitted. They also asserted that students have benefitted from the project.

The research model used – of a teacher-researcher implementing the action research cycle in educational settings with support from a lead researcher – was successful, suggesting this may be an effective model for future projects.
**Recommendations from the Project**

The Project recommends that the following areas of development are considered:

**Education/Children’s Services**

1. The education workforce, together with the range of health and social care professionals who support it, need advice and information about what FASD is, an understanding of the complexity of needs and compounding factors, how it affects learning and how to support students responsively and flexibly in the classroom. This includes listening and responding to parents/carers as well as students’ views. This would be supported by the findings of the Lamb Inquiry 2009 (Chapter1) and the Salt Review 2010 (p.26).

2. More detailed consideration needs to be given to the curriculum for students with FASD, particularly teaching approaches which recognise the need for specific interventions which match the unique learning profile (e.g. memory, organisational skills) of these children.

3. In planning curriculum programmes, teachers should be mindful that the emphasis on cognitive ability is distracting, as this is not necessarily an indicator of how able the student is in coping with a particular approach/task/educational setting or package of services.

4. A more robust process of assessment of needs for students with FASD needs to be put in place, which is better suited to the particular range of difficulties experienced by students with FASD, and more sensitive to the vulnerability they face as they move through the education system and into adult life.

“My argument is education has to be more than just about meeting the academic criteria and socially, she is just way behind her peers in mainstream school. She’s 8 and she’s just about learning to play with dolls and she doesn’t really have imaginary play, she’s so far behind socially but our education system doesn’t see that as the main criterion.”

(Parent interview)

5. Thought needs to be given to the lifelong implications of FASD, and in particular reflection
on an individual’s social and emotional functioning and ability to acquire life skills would be helpful.

**Workforce Development**

1. The outcomes of this project need to be widely disseminated and proactively advertised in order for as wide an audience as possible to receive information about the availability of the information.

2. Inclusion of material on supporting students with FASD should be considered for modules delivered at Universities on Profound and Multiple Learning Difficulties (PMLD), Severe Learning Difficulties (SLD), Moderate Learning Difficulties (MLD), Complex Learning Difficulties and Disabilities (CLDD), Behavioural, Emotional and Social Difficulties (BESD), Autistic Spectrum Disorder (ASD), Attention Deficit and Hyperactivity Disorder (ADHD), and Sensory Impairment (SI).

3. Attention should be given to methods of assessment for service support packages and educational provision available to students with FASD and their families. There needs to be quality information in educational provision available to families about the holistic support package available including therapies which may support students’ individual needs.

4. Greater awareness of FASD amongst Educational Psychologists, Clinical Psychologists and others responsible for statutory assessment is necessary.

5. Trainee and practising teachers and the professionals who support them in meeting the complex needs of students with FASD need to be aware of the physical disabilities, health and medical aspects and learning difficulties faced by students with FASD and the implications for inclusive practice. They also need to know the similarities to and differences from other, apparently similar, conditions.

6. It is necessary for a range of professionals to be involved in the support package offered to students with FASD and their families. Teachers will need to be aware, therefore, of the range of professionals who may be involved and understand the role they play in strategies and interventions designed to support students, so that they may signpost parents to appropriate services and effectively implement such strategies and interventions in the classroom.
7. More information about FASD is needed in the education, health and social care services and society generally so that individuals affected and their families can be fully included in all aspects of life with proper understanding about the complexity of the condition, which is significant.

Health

1. There needs to be development of Therapy Services (e.g. speech and language, occupational therapy) that are aware of the needs of students with FASD. The complex sensory profile of the student with FASD calls particularly for the skilled input of an Occupational Therapist and sensory integration programmes.

2. Students with FASD are prone to mental health problems. Mental health and emotional wellbeing should be assessed regularly in order to provide early detection of signs and symptoms so that students can receive appropriate support delivered in a timely manner through school and/or CAHMS.

3. As a public health risk, more information needs to be available within society generally about the implications of drinking whilst pregnant. In particular a focus within school PSHE programmes would be valuable.

Families

1. Advice and support for parents/carers about the range of services available to them, and how they may be accessed through Aiming High for Disabled Children is necessary.

2. Many children with FASD are fostered or adopted. Respite care and short breaks should be offered to parents, to enable them to cope with the challenges of living with their child (or children) within the context of their family.

3. Information about FASD needs to be available to the range of professionals who might assess and support students with FASD and their families.

4. The provision of supported/sheltered living accommodation, possibly with work and leisure opportunities on site, where individuals may have a degree of independence at the same time
as being able to access assistance with daily living skills is required to ensure success for individuals with FASD throughout adult life.

Research

1. Further educational research should be undertaken to investigate specifically and in more detail the levels of, and routes to, engagement (in particular of secondary aged students) with FASD in mainstream education. Specific interventions to improve levels of engagement, working memory, organisation skills, peer relationships and emotional development need to be investigated.

MAIN REPORT

Introduction and background to the project

(A project literature review is available online: www.nofas-uk.org.)

What is Foetal Alcohol Spectrum Disorder?

Foetal alcohol exposure is the leading known cause of intellectual disability in the Western world, and it is estimated internationally that one in every 100 children are born with Foetal Alcohol Spectrum Disorders (FASD) (British Medical Association, 2007). This is greater than the number of children born in any year with Down’s Syndrome, cerebral palsy, cystic fibrosis and spina bifida combined. Based upon these estimates in the context of annual birth figures produced by the Office of National Statistics, there are likely to be 6–7,000 babies born with FASD of varying severity in the UK each year.

FASD can cause a range of physical and intellectual disabilities. Possible physical disabilities include facial differences and major organ damage, as well as hearing and vision impairments. Damage to the brain results in developmental disabilities, which can include general learning difficulties, language, social or motor skills impairment, memory impairment and attention deficits, poor consequential thinking and poor planning ability.
Students affected by FASD can also face misunderstanding about the often hidden cause of their challenging learning behaviours. Continuing misunderstanding can contribute to the development of secondary difficulties for the student.

**Teaching students with FASD**

Students with FASD will present with a pronounced and complex set of needs that can make it difficult for teachers to know how best to support them. In the UK, little is known about FASD and the approaches that may be helpful in educating children affected, and there is currently no UK government guidance on this. This has implications for the inclusion of students affected in the classroom across the range of ages, curricula and educational settings. It also has implications for teacher training and professional development.

The project literature review has identified the following findings:

- Diagnosis of FAS is controversial and under diagnosis is believed to be common due to an overlap with a number of other conditions.

- There are barriers to accurate diagnosis, including a lack of knowledge about the effects on the unborn child of alcohol use during pregnancy, and failure to ask about alcohol use during pregnancy and to identify ‘at-risk’ pregnancies. Health professionals may also have inadequate knowledge of the diagnostic features and currently used diagnostic criteria and may lack confidence in the management of FASD, including uncertainty about referral processes, diagnostic services, and treatment. Reluctance to discuss the diagnosis with parents/carers and fear of stigmatising the child and family may also be deterrent (Elliott et al, 2006; Payne et al, 2005). Some professionals may be reluctant to deliver a socially unacceptable diagnosis which currently carries no associated benefits by way of specialised intervention or funding. Under diagnosis may be due also to the diagnostic overlap with a number of other conditions (e.g. Attention Deficit Hyperactivity Disorder (ADHD), Autistic Spectrum Disorder (ASD) etc.) and the rigorous demands of diagnosis (Autti-Ramo, 2002).

- It is likely therefore, that there are more children with FAS and FASD in our schools than records suggest. This has implications for students in the classroom.
• Diagnosis is important because an understanding of the nature of a student’s difficulties can lead to a more effective intervention or strategy and reduce secondary disabilities and the potential for poor life outcomes.

• Anecdotally, there is a paucity of knowledge and understanding about FASD within the medical profession making diagnosis and effective provision of support packages more difficult.

• The educational achievement of students with FASD is below that commonly associated with their IQ score. Living skills, communication skills, adaptive behaviour, social skills and emotional maturity are areas where students will be functioning at a developmental level which is lower than chronological age would suggest.

• Difficulties are most pronounced in the areas of language delays and difficulties, cognitive impairment, compromised executive function, behavioural/emotional difficulties, working memory and visuo-spatial difficulties, social difficulties, sensory processing difficulties and motor functions.

• Secondary disabilities, such as mental health problems, disrupted school experience, trouble with the law, confinement, inappropriate sexual behaviour, problems with independent living and employment can result from a lack of identification/support when students are at primary age.

• Transition from primary to secondary education needs careful management as learning, behavioural, emotional and social difficulties typically become more evident as students with FASD progress through school. An assessment of needs should be undertaken at this point in order to plan interventions and support.

**Aims of the Project**

The aims of this research project were to:

• develop teaching and learning frameworks for teachers and other professionals involved in the education and support of students with FASD
• share good practice across the education workforce
• investigate the educational implications of FASD in a UK context and their relevance to Initial Teacher Training and Continuing Professional Development

• raise appreciation among teachers for the need of close partnership with families in delivering effective education for these children.

**Methodology**

The project was carried out using a qualitative case study and action research approach. Data collection included:

• Establishing the student voice: achieved by using a multi-method approach of ‘listening’ to children, and interviewing their parents and teachers
• observing students and teachers in the classroom in order to identify effective teaching and learning strategies
• observing and recording the challenges for inclusion.

Data collected from engagement observations, and as a result of talking to and observing students and teachers, and talking to parents, have been synthesised into a series of illustrative case studies. Data from interviews were also subject to categorical content analysis.

**Project Participants**

Students included in the project include 6 girls and 3 boys though generally it is thought that prevalence amongst the total population is 1:1 female to male. Of the 9 students involved in the project, 7 are living with adoptive parents and 2 with biological parents (1 with biological mother and 1 with biological father). Three of the students are medicated for Hyperactivity. Eight students have a Statement of Educational Needs, and one has a ‘Statement in Lieu’ which means that her needs are assessed on an ongoing and regular basis by the school in consultation with other professionals. Eight of the 9 students are the only student in their school with a diagnosis of FASD, in the remaining school there are 2 students with a diagnosis. The students are aged from 6 to 19. No student, family or teacher was discriminated against due to their race, colour, ethnic origin, national origin, religion, gender, age, sexuality, physical disability, mental disability or appearance.

Baseline profiles highlighting the individual strengths and difficulties, together with levels of engagement for the 9 students involved in the project can be found in Appendix B, together with the strategies trialled from the project frameworks for that student and teachers comments regarding
their success or otherwise.

Education staff supporting the students, and the students’ parents (birth and adoptive) have contributed to the research.

Since parents are children’s first and most enduring educators, it was appropriate that parents were valued as co-educators of their children and their views on their child’s educational experiences recorded as well as those of students themselves, and of the range of professionals working with them.

In order to identify what challenges existed for the students, as well as effective solutions, it was necessary to record the lived experience (perspectives from parents and students) as well as the educational experience (perspectives from teachers).
Criteria for Inclusion in the FAS-eD Project

The project aimed to find a range of students whose combined diagnoses represented the full spectrum of Foetal Alcohol Spectrum Disorders (FASD). On searching for students whose parents and schools were prepared to participate in the project, however, the research group found only students with a diagnosis of Foetal Alcohol Syndrome (FAS) or partial FAS (pFAS), though some students had additional diagnoses. Students were, in the first instance, volunteered by schools and/or parents due to their Special Educational Needs, the implications for schools in terms of teacher training, and the opportunity to seek and highlight an appropriately sensitive and effective pedagogy for their staff.

Students with one of the following FASD diagnoses were invited to be included in the project:

- FAS: Confirmed alcohol exposure
- FAS: No confirmed alcohol exposure
- pFAS: Confirmed alcohol exposure
- Alcohol Related Birth Defects (ARBD)
- Alcohol Related Neurodevelopmental Disorder (ARND)

Initial diagnosis might have been made by a GP, Paediatrician, Community Paediatrician, Specialist Paediatrician, Clinical Geneticist or FASD Specialist. Simple mention of FASD in Statements of Special Educational Need, Individual Education Plans or assessments by professionals such as Educational Psychologists was not accepted as a diagnosis, but was used as corroborative evidence.

Where the original diagnosis was not made by either a Clinical Geneticist or FASD specialist, the project’s commissioned Consultant Psychiatrist, Dr. Raja Mukherjee, confirmed diagnosis using the 4-digit Code method (Astley 2004). This relies on a photograph of an individual and information about current height, weight, head circumference and learning difficulties as well as information about post natal measurements and growth/health data and maternal alcohol consumption. Six of the nine students had diagnoses of FAS made by a Clinical Geneticist or FASD Specialist, leaving three students for the researcher to obtain photographs and medical/health information for Dr. Mukherjee. Obtaining information about post natal growth and health records was problematic for two of the students due to their movement within the social care system and consequent loss of data in transition from one placement to another. However, a limited amount of information was obtained
together with current measurements and learning profiles. Dr. Mukherjee’s analysis showed that whilst one of the students had FAS, the other two did not and that their most likely diagnosis for them was ARND.

Students living with biological parents and adoptive parents were accepted for inclusion in the project. However, children in foster care were considered to be unsuitable due to the transitory nature of their circumstances.

Students with FASD may be diagnosed with co-existing conditions (Streissguth, 1997). Among the students included in this project, were those who had additional diagnoses such as Autistic Spectrum Disorder (ASD), Attention Deficit Hyperactivity Disorder (ADHD), Reactive Attachment Disorder (RAD) and Oppositional Defiant Disorder (ODD) Tourette’s Syndrome, Anxiety Disorder as well as complex medical needs.

**Data Collection**

Primary data was gathered via a combination of interviews, observations, surveys and questionnaires and dialogue with children (a multi-method approach). The Mosaic approach of Listening to Children (Clark and Moss 2001)\(^1\) was used to assist with the development of primary and secondary teaching and learning frameworks. Strategies and pedagogies from other overlapping areas of SEN such as ASD, ADHD, SID and Attachment Disorders have been borrowed and adapted to further inform the frameworks.

Early visits to schools provided an opportunity to baseline using the following tools:

- Semi-structured interviews with parents and teachers to discover students’ strengths and areas of difficult in the classroom. Teachers were also asked to complete an initial questionnaire designed to highlight barriers to learning for students, as well as effective teaching and learning strategies and knowledge about FASD amongst Teachers.

- Simple engagement scales were used to assess students’ level of engagement in learning (researcher observation). For more information about engagement scales and their use with

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\(^1\) The Mosiac approach is a multi-method approach in which children’s own photographs and tours can be joined to talking and observing to gain deeper understanding of their perspectives on their educational experiences. It was developed to assess very young (some pre-verbal) children’s perceptions on their early childhood settings, but can be used for older children, particularly those with communication difficulties. Children’s thoughts and perceptions can be joined to parents and educators opinions and experiences to inform frameworks for services and educational provision.

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students with learning difficulties see Brooks (2010).

- The Strengths, Difficulties and Weaknesses questionnaire (SDQ) was completed by educators and parents (with support from the researcher and only when parents/teachers were willing). The SDQ is a brief behavioural screening questionnaire for 3-16 year olds. It has five sections that cover details of: emotional difficulties; conduct problems; hyperactivity or inattention; friendships and peer groups; and also positive behaviour. The SDQ has been internationally validated and can be downloaded from Youth in Mind: http://www.sdqinfo.com.

- Creative listening to children using walking tours (Clark and Moss 2001) and non-scripted (child led) discussions with students (student voice). Walking tours are a way of ‘listening’ to children by allowing them to lead a tour of their environment using a sound recorder, camera and/or drawings to record images and sounds in a format chosen by them. These images and recordings can then be used to make a map or model of their environment which they can discuss with a teacher or researcher. The tours are led by the children.

All research participants were asked to sign consent forms in relation to their participation in the project, including taking part in an interview, being photographed and filmed and allowing the use of all data gathered for the purposes of informing the education workforce and future policy about the needs of students with FASD. The researcher endeavoured to ensure that wherever possible children were supported to be autonomous in giving assent. A familiar adult was present to facilitate this. Provision of sufficient information at a level compatible with the child’s level of understanding was facilitated through use of the student’s unique method of communication. The researcher encouraged the students to make an active decision about their participation in the project by conducting a discussion with them at a developmentally appropriate level. Further safeguards were provided by obtaining the permission of parents and teachers for students’ involvement in the project.

Further visits to schools provided the opportunity to trial teaching and learning approaches with teachers through an action research cycle (see below), further observe children and monitor progress through discussion with teachers (teacher-researcher collaboration). The final visit provided an opportunity to measure overall progress through discussion with teachers, and provide teachers with an evaluation form to complete in order to assess the effectiveness of the resources developed by the project.

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2 Children can express themselves in many ways other than verbal means such as through play, drawings and photographs. Researchers need to ‘listen’ to the different ways in which children express themselves in order to ensure that “children can feel confident, safe and powerful, ensuring they have the time and space to express themselves in whatever form suits them” (Robert Holmes 2005).
A focus group of trainee teachers was provided by a UK university, which provided the opportunity to assess the possible issues and relevance of learning about FASD to Initial Teacher Training, as well as highlighting what knowledge trainee teachers might need in order to teach students with FASD.

**Research Ethics**

**Research and Ethics Committees**

The research design was subject to scrutiny and approval by a relevant, professionally recognised research and ethics committee prior to contacting potential participants about the project. BERA and ESRC guidelines were consulted and observed within the project.

**Fully Informed Consent of Participants**

The ethics of working with children in research is recognised as an area in which sensitivity is required, and the National Children’s Bureau (NCB) *Research Guidelines* (NCB, 2003) informed the research approach. Written permission from prospective research participants (local authorities,
school head teachers, educators, students and the students’ legal guardians) for their involvement in the research was sought only after detailed and open written project information was provided to them. The researcher ensured that as far as possible their consent was fully informed in relation to their level of understanding. This has included the following:

- Participants were explicitly informed about their rights – to ask questions and receive satisfactory answers at any time, to withdraw from the research at any time without adverse consequences, to review any data or other information held about them, to receive information about project results, outcomes and dissemination.
- It was made clear how the data would be collected, who would have access to data held about research participants, how the data would be stored, and how it would be used. Video and audio recording were subject to specific agreement. Any and every instance of additional use of the data required a specific consent pro forma to be completed.
- The steps taken by researchers to ensure participants’ anonymity were explained.
- Participants were given contact details for the researcher. They were also given the opportunity to discuss any aspect of the research they felt unsure about with a member of staff from their school with whom they were familiar, as well as a representative from the project team should they wish to do so.
- When permission was sought from students under the age of 16, this was in the presence of a familiar, independent adult, and the information about the project was presented at a level and to a degree that the child could understand in accordance with the National Children’s Bureau’s ‘Guidelines for Research’ (NCB, 2003).
- Video and camera capture for use in publicity materials did not include any students outside of the research cohort without the permission of those students, their parents and teachers. Specific ‘teaching and learning situations’ have been simulated for the purpose of producing podcasts to ensure that students outside the cohort are not inadvertently captured unless and except where permission was granted.

The permission of all prospective participants to participate was been freely given and not coerced. The entitlement of children to protection under the United Nations Convention on the Rights of the Child (1990) was observed by the research team at all times.
Essential Data Collection
Research tools and data collection methods were designed to elicit specific information of direct relevance to the project and its outcomes. As far as possible, unnecessary data collection was avoided. Data collected was stored securely.

Confidentiality and Data Protection
Data collected in the course of the research was subject to rigorous data protection procedures. A confidentiality and data protection agreement between the research participants and researchers covering the collection and use of raw data was signed. Data used was anonymised and, at the end of the project, non-essential raw data was destroyed. All other data will be securely stored for a period of three years before it is destroyed. Raw data was kept at all times with due regard to confidentiality, and was not shared with anyone outside the core research group without explicit and specific permission from the participants concerned.

Equality And Diversity
This research project was committed to promoting equality and diversity. We did not knowingly discriminate against any person on the grounds of age, disability, gender, race, religion and belief or sexual orientation or any other grounds that are irrelevant to a person’s or an organisation’s ability or potential.

Findings
The findings of the project can be broadly separated into experiences of living with FASD (perspectives from students and parents) and experiences of teaching a student with FASD and supporting their family. Findings from initial questionnaires, interviews (including SDQ data) and researcher observation have been combined to produce case study profiles of students (Appendix B), as well as a body of findings in this report which combines the perceptions of all nine students, parents and teachers. Researcher observations of engagement in learning are recorded individually for students in the case study profiles as well as collectively by type of setting in the body of the report in order to highlight patterns of engagement within each type of educational setting (primary, secondary and special). In presenting the findings, the researcher has used the terms ‘child’ and ‘student’ to mean child/young person/student. Parents’ perceptions have been generally recorded using the term ‘child’, and teacher/researcher perceptions/observations generally recorded using the term student.
An initial questionnaire was completed by at least one member of staff from each school. The questionnaire asked about barriers to learning for students as well as successful teaching and learning strategies, levels of teacher confidence in supporting students affected and particular subject areas where students with FASD may have had strengths and particular difficulties, in order to build a learning profile and starting point for building teaching and learning frameworks (Appendix C). In one school, a teaching/inclusion support assistant completed a questionnaire as well as a teacher. A total of 10 questionnaires were returned from the 9 schools involved. The term teacher is used throughout this report to mean any member of education staff with whom the researcher liaised throughout the project, including support staff and SENCos.

In addition 9 parents and 9 teachers (sometimes with another teacher/teaching assistant/the school SENCo present) were interviewed, and all 9 students were given the opportunity take part in a discussion about their education and school experience. During the interview, a Strengths and Difficulties Questionnaire was completed by both parents and teachers. The Strengths and Difficulties Questionnaire (SDQ) is a brief behavioural screening questionnaire about 3-16 year olds. It exists in several versions to meet the needs of researchers, clinicians and educationalists. Each version includes between one and three of the following components:

The SDQ questionnaire asks questions about 25 attributes, some positive, and others negative. These 25 items are divided between 5 scales:

1. Emotional Symptoms (5 items).
2. Conduction problems (5 items).
3. Hyperactivity/inattention (5 items).
4. Peer relationship problems (5 items).
5. Prosocial behaviour (5 items).

The scores from these scales are added together to give a total score based on 20 items (leaving out prosocial behaviour). The extended version of the SDQ used in this project also asks whether the respondent thinks the student has a problem, and if so, enquires further about chronicity, distress, social impairment, and burden to others. This can provide useful information about the type of support a student might need. The results from the SDQ were used to highlight needs for individual students and can be found in the profiles in Appendix B. They show that the range of needs varies between students. Interestingly students have low scores for prosocial needs from parent
perspectives, and 6 out of the 9 students from teachers’ perspectives, demonstrating that initiating peer interactions is a strength for the students involved in this project.

Although the number of students involved in this project does not provide sufficient quantitative data to highlight trends which may be generalised in this area, it is interesting to note from the attached student profiles that students in secondary education present with a higher score in most of the above areas, including their total level of difficulty, than those in primary or special education. In addition, there is more agreement between teachers and parents of secondary aged students as to the level of difficulty/need in all areas of the SDQ; this also applied to the secondary aged student placed in special education.

1. **The Lived Experience: Parent Perspectives**

*Parent Perspectives - Education*

In terms of education and learning, in interview parents highlighted the following as areas of success in learning for their child:

- Learning to read (6 parents).
- Enjoying school/being keen to learn (4 parents).
- Writing (3 parents).

Parents indicated that their child enjoyed and succeeded in the following subjects:

- Drama (2 parents).
- PE/Sport (2 parents).
- French (1 parent).
- History (1 parent).
- Art (1 parent).

In interview, parents highlighted the following as areas of difficulty in learning for their child:

- Poor social skills, causing difficulty with peer and sibling relationships (9 parents).
- Poor organisational skills, particularly in relation to life and hygiene skills such as dressing (9 parents).

- Understanding abstract concepts, including mathematical concepts such as time and money (7 parents).

- Difficulties with concentration and distraction leading to outbursts (5 parents).

- Immaturity (4 parents).

- Difficulties with short term memory and retaining information (4 parents).

- Understanding danger/safety coupled with impulsivity (3 parents).

- Frustration when unable to grasp or understanding the meaning of something, leading to aggressive behaviour or temper tantrums (3 parents).

- Medical problems, including a restricted diet, resulting in missed lessons and fatigue during and at the end of the school day (3 parents).

- Sensory processing difficulties (3 parents).

- Poor fine motor control, in particular difficulty in holding a pencil (2 parents).

- No understanding of cause and effect (1 parent).

- Difficulty in understanding boundaries (1 parent).

- Difficulty achieving anything independently (1 parent).

- Poor sleep patterns, resulting in behavioural difficulties and fatigue within the family (1 parent).

When asked what kind of teaching and learning environments and strategies would best support their child, parents indicated the following would be most useful:

- 1:1 adult support and close supervision (8 parents).

- Repetition (‘overlearning’) of lessons, themes and tasks (5 parents).

- Allowing children to work at their own level and pace (5 parents).
- Small class sizes (4 parents).
- Visual prompts or tools to support learning experiences (4 parents).
- Reduction of noise and other environmental distractions (4 parents).
- Familiar adults whom the child knows well and who know the child well (3 parents) and who adopt a consistent approach across the school.
- High levels of adult support (3 parents).
- Small, achievable targets and structure in school and lessons (2 parents).

Parents were asked about their experience of the education system and their feelings about their child moving through the education system. Those parents whose child was placed in a special school related positive experiences about their child’s education saying that they and their child were well supported with appropriate adult to child ratios and teaching and learning strategies and environments in place, coupled with regular and effective communication between home and school:

“The staff in this school have been very supportive. Whether she ends up highly educated or not, the learning position she’s in is just right for her and she’s happy.”

However, one parent related a negative experience in mainstream primary education prior to her child being placed in special education saying “to put her in classroom of 20 – 25 children was the worst thing I ever could have done really ... she just could not cope”, and another expressed concern that her child might be forced to go back to mainstream if she did well academically:

“My argument is education has to be more than just about meeting the academic criteria, and socially she is just way behind her peers in mainstream school. She just doesn’t get it. She’s going to be 8 next month, and she’s into Iggle Piggle, just about gets Charlie and Lola, High School Musical she thinks she likes but she just doesn’t get it. She’s just about learning to play with dolls, and she doesn’t really have imaginary play. She’s so far behind socially, but our education system doesn’t see that as the main criterion.”

Parents with a child in mainstream primary education also expressed positive experiences about their child’s education, but one parent highlighted a need for more support in deciding the most suitable learning environment when their child moves from primary to secondary education as:
“We know our child and we know bits about schools, and we assumed that there would be people who knew about people in our child’s situation and which school would be best which would give us a clearer idea about it. It’s a difficult decision and we need first hand experience to draw on.”

Parents of children in mainstream secondary education related positive experiences about individual members of staff within schools. However, 2 parents shared concerns about the suitability of the environment for their child, in particular relating to their child’s difficulties with organisation skills, sensory processing difficulties and poor short term memory. They implied that moving from lesson to lesson, busy, noisy classrooms and corridors, and a multitude of teaching staff within one day led to outbursts and behavioural difficulties when the student got home at the end of the day:

“I think it’s very difficult for her, because there’s so much going on and so many distractions. The slightest distraction and her attention is on whatever else is happening.”

“I know that she gets caught up when she moves from one class to the other. She sees something or somebody says something and that will distract her.”

In addition, 2 parents expressed concern about their child’s transition, the first to post 19 education, which is imminent and the second from his current special school to post 16 education in a few years:

“Obviously, I’m a bit apprehensive, not sure how he’s going to manage and obviously there are certain restrictions he has with having to have 1:1 support ... there are certain grand ideas he has and things he’d like to do. Some of them are totally unrealistic.”

“It’s that sort of sickening feel about what’s going to happen next that I get.”

The need for more information and knowledge to be disseminated to the education workforce, education departments and the professionals who support their decisions was highlighted by the parents of 6 of the children (2 from each setting type) They felt that parents should not feel that the onus is on them to educate the professionals before their child’s situation can be considered appropriately:

“I am surprised to have come across so many people who have no awareness of it (FASD), didn’t seem to understand the impact it has on all aspects of children’s

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development, but particularly on the way that they learn. We have talked to Educational Psychologists, and they’ve often said that we probably know more than them and sometimes that’s a little bit worrying.”

“We can’t get statements for any of our children ... it would be easier in a sense if they had Down Syndrome because at least you can see that. But their difficulties are internal. It’s (FASD), new in England, so all we can hope is that the professionals are going to work with us.”

“She’s got to go through school; she’s got no choice. Again most of the teachers and most people do their best for her, and I have no doubt that they have her best interests at heart. My doubt is that I don’t think they really understand what they’ve got. So as she moves through school, there needs to be ongoing training, ongoing support, ongoing information and raising awareness to teachers, about her needs because they change daily, and as she gets older her needs will change more and they will not get easier.”

Seven of the 9 parents commented on support they had received from their child’s school and 3 parents mentioned particular teachers who had been supportive in signposting other professionals and providing information about services available to parents.

Parent Perspectives - Other Professionals

In addition to being asked about the education system and the impact of that on their child’s development and progress (see above), parents were also asked about other professionals involved the package of support offered to their child. The following professionals were mentioned (some of these services being delivered at school):
<table>
<thead>
<tr>
<th>Type of Professional</th>
<th>Social Care (9 parents)</th>
<th>Speech and Language Therapist (5 parents)</th>
<th>Physiotherapist (4 parents)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Paediatrician (6 parents)</td>
<td></td>
<td>Occupational Therapist (4 parents)</td>
<td>Educational Psychologist (3 parents)</td>
</tr>
<tr>
<td>Mental Health Team (3 parents)</td>
<td></td>
<td>Dietician (2 parents)</td>
<td>Orthopaedic Spinal Specialist (2 parents)</td>
</tr>
<tr>
<td>FASD Specialist (2 parents)</td>
<td></td>
<td>Geneticist (5 parents)</td>
<td>GP (2 parents)</td>
</tr>
<tr>
<td>Learning Disabilities Team (1 parent)</td>
<td></td>
<td>Inclusion Support Team</td>
<td>Psychologist</td>
</tr>
<tr>
<td>Play Therapist</td>
<td></td>
<td>Music Therapist</td>
<td>Orthotics</td>
</tr>
<tr>
<td>Children’s Charities (NSPCC, Barnardo’s)</td>
<td></td>
<td>Police Officers</td>
<td></td>
</tr>
</tbody>
</table>

Table 1: Professionals/Services Involved in the Support Package offered to Students with FASD

Parents noted the poor knowledge about FASD amongst teachers and other professionals (5 parents). They reported that the most useful professional/service involved in supporting their child has been:

- Paediatrician (2 parents).
- FASD Specialist (2 parents).
- Speech and Language Therapist (1 parent).
- Mental Health Team (input on behavioural issues) (1 parent).
- GP (1 parent).
- Psychologist (ongoing assessment of social and emotional difficulties) (1 parent).
- Play Therapist (1 parent).
The need for multi-disciplinary assessment was highlighted in order for needs to be effectively identified:

“These children have to have a multi-disciplinary assessment. We have to keep saying the same thing to 10 or 20 people; it should all come from one thing.”

One parent, whose child’s needs were “mostly medical” expressed her frustration that each medical professional she saw with her child worked in isolation from the other medical professionals, and no-one was joining up all the pieces of his needs to build a picture of his condition:

“I’ve always wanted somebody to come along and say, ‘I’m going to look this child with FAS as a child with severe medical problems.’ We’ve had so many medical professionals involved .... not many of them have known enough about FAS to say this is standard procedure with a child with this problem.”

The need for information about FASD and how it affects children’s development to be available to services such as Respite Care was highlighted by 3 parents so that staff in respite centres can effectively support children and families. One child involved in the project has already spent a night in police custody due to his opportunistic, inappropriate interactions with other children during a visit to a respite centre. His parent felt that if staff were more aware of the implications of FASD, they would have been better prepared for this possibility.

Parent Perspectives - Life Skills

The acquisition of life skills was an area of difficulty causing concern amongst all 9 parents. Six parents stated that their children remembering to do things like brush teeth, flush the toilet, shower regularly was very hit and miss; sometimes children remember and sometimes they do not, and “every day is different”. Parents also highlighted difficulties with being organised when dressing, remembering which way round to put items of clothing on, becoming distracted by buttons/specks of dust/zips whilst getting dressed for lengthy periods of time (until refocused by an adult) and needing constant reminders (reported by 7 parents) to ‘stay on task’ and be dressed in an acceptable time. One parent reported that this could lead to temper tantrums and outbursts. Wearing inappropriate clothing for the time of year was also reported by 3 parents. Delayed development in achieving childhood milestones was reported by all parents, and in particular the length of time necessary to
achieve success in toilet training is common (6 parents). For example, soiling beyond primary age has been reported by 3 parents.

Parent Perspectives - Relationships with Peers and Siblings in the Home

Difficulty in relationships and immature social skills were reported by all 9 parents. The following difficulties were particularly highlighted:

- Lack of sense of danger for themselves and others, impulsivity and inappropriate attachment to others (for example picking up Bunsen burners and chemicals in a science lesson and dashing across the room with them, dashing across busy roads at secondary age without understanding road safety, a propensity to talk to strangers about a range of inappropriate subjects and be over familiar with them) (6 parents).

- Preferring to play with younger children (for example, with children 3 – 4 years younger than themselves) and always following the lead of peers rather than playing or interacting equally (4 parents).

- Playing/interacting at a much younger level than peers demonstrating limitation in the level of interaction/play, resulting in peers becoming easily bored with their company and moving on to another topic/area of play (3 parents).

- Being desperate for friends, but not really having any (2 parents).

- Being overpowering with peers well into secondary age (dominating conversations and games, being frustrated by the necessity to compromise in order to please others) (2 parents).

- Being over affectionate/over tactile with peers causing irritation (hugging and kissing and rushing to greet peers beyond primary years) (2 parents).

- Being inconsistent with their approach to friends, sometimes empathetic, sometimes not (1 parent).

- Being insecure in friendships characterised by constantly asking peers if they will be friends and play and not being sure about who their friends are (1 parent).

- Inappropriate, opportunistic behaviour towards other vulnerable young people (comments/conversation of a sexual nature) which has resulted in one student spending the night in police custody (1 parent).
This, together with their lack of awareness of danger (6 parents), means that children with FASD need constant supervision when playing/interacting with peers (reported by 7 parents):

“She wants to be free. She wants to be like any 13 year old who can do what they like, and she just can’t. I would love her to, but that’s just not possible. That causes problems.”

Parents also feel they have to be a referee/intermediary/guiding voice between their child and siblings/peers (8 parents).

Parent Perspectives - The Future

When asked about their child’s future, parents expressed their concerns in terms of “being scared about the future” (2 parents) and worry about their child’s vulnerability (6 parents). Other parents talked about how “hard” or “difficult” they thought it would be for their child to be an independent adult (3 parents) and felt there would be “restricted freedom” as their child would need 1:1 supervision (4 parents) through to adult life. This is validated by a Psychologist attached to one of the schools who has stated that one of the students in question will need 1:1 support always in order to protect him and safeguard others. One parent admitted that she had not given much thought to the future as she “takes each day as it comes and hope he catches up.”

The type of support that parents wanted to see in place for themselves and their child for the future included:

- Supported/sheltered lodgings with work, living accommodation and leisure facilities on one site for individuals with FASD (4 parents).
- The Camphill Trust offers opportunities for people with learning disabilities, mental health problems and other special needs to live, learn and work with others of all abilities in an atmosphere of mutual care and respect and may be of interest to parents and teachers [http://www.camphill.org.uk/](http://www.camphill.org.uk/).
- The opportunity for parents to talk to other parents with an older child with FASD, with whom they could discuss the future in order to be better prepared for their own child’s future (4 parents).
- Respite care for parents (3 parents).
- More recognition and understanding in general society about FASD and the difficulties
facing individuals affected (1 parent).

- Recognition of the social difficulties of FASD and less emphasis on intellectual ability for assessments (1 parent).
- More emphasis on social and skills and life skills within the education system for students with FASD (1 parent).
- A support network of professionals and friends to guide the child through life (1 parent).

2. **The Lived Experience: Student Perspectives**

The students involved in the project were given the opportunity to talk about their education with the researcher. A variety of discussion methods were used according to the preference of individual students and the suitability of method to the environment. Sometimes more than one method was used if a particular student did not respond to a previous method. Students were reminded that they could withdraw from discussion at any point and were given frequent opportunity to do so. For some students (3), a familiar adult was present in the room at the request of the school, and for another student, it was necessary for safeguarding purposes for another adult to be present in the room during discussions with the researcher.

A combination of students’ drawings as discussion tools (where students were happy to draw) and general discussion was the most successful means of hearing students’ voices. All students agreed to take part in a discussion with the researcher. However, 1 student did not directly answer any of the researcher’s questions, and it was not clear whether he had not heard them correctly, did not wish to answer them, did not understand them or was simply overwhelmed and distracted by being out of his normal lesson and in an unfamiliar situation. Another student was frustrated throughout the discussion as he had come from a lesson which had caused annoyance and impatience due to his misunderstanding of the task, and frustration with the TA who endeavoured to support him. He was reluctant, therefore, to answer questions, and the discussion ended promptly to avoid an outburst or any discomfort on his part. Therefore, a full discussion was not possible with 1 student attending mainstream primary education and 1 student attending special education (though he did answer some questions before the discussion ended). The discussions were as child led as possible (there was no script) and questions as open as possible.

Initially, the researcher had intended to use learning tours in order to discover appropriate learning
environments for students with FASD. It was hoped that students would photograph specific areas of the school, which could then be used as a discussion tool. However, the students with whom this method was used took photographs of other students, for which the researcher did not have permission, or photographs of specific equipment such as captains’ chairs and medical equipment as well as other students. For one child, the resulting discussion centred on which of the students photographed they were friends with or not. Whilst this illuminated the importance of friendships to some students, it did not provide information about appropriate learning environments.

Of the students with whom a discussion was successful, the following areas of learning enjoyed by students were highlighted:

<table>
<thead>
<tr>
<th>Subject</th>
<th>Art (4 students)</th>
<th>Numeracy (5 students)</th>
<th>Performing Arts (3 students)</th>
<th>Sport/PE (3 students)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Literacy</td>
<td>(3 students)</td>
<td>ICT (2 students)</td>
<td>Science (1 student)</td>
<td>Role Play (1 student)</td>
</tr>
<tr>
<td>Technology</td>
<td>(1 student)</td>
<td>Music Therapy (1 student)</td>
<td>History (1 student)</td>
<td>Community Lessons (1 student)</td>
</tr>
</tbody>
</table>

Table 2: Areas of Learning Enjoyed by Students with FASD

Areas of learning which students highlighted as being difficult include:

<table>
<thead>
<tr>
<th>Subject</th>
<th>Maths (3 students)</th>
<th>Science (2 students)</th>
<th>ICT (1 student)</th>
</tr>
</thead>
<tbody>
<tr>
<td>PE/Sport</td>
<td>(1 student)</td>
<td>Music (2 students)</td>
<td>Writing (2 students)</td>
</tr>
</tbody>
</table>

Table 3: Areas of Learning which Students with FASD Find Difficult

When asked what teachers could do to make learning easier, suggestions included:

- Move me down a level.
- Give me examples to keep on my desk so that I can see if I have got things the right way round.
• A TA in Science to write things down for me so that I can concentrate on looking and listening, then when I need to write, I’ll have the information ready.

• A TA to take the student to lessons then pick her up afterwards rather than having a TA with her in every lesson as having a TA in every lesson is “annoying and irksome.”

• Explain things more and more.

• Show me things, instead of telling me.

When asked what they thought they would be/do when they grow up, students’ ambitions covered a range of aspirations which appeared to be based in their own life experiences and interests at the present time (see below). For example, the ambition to be a footballer is based on the student’s recent visit to Italy where she discovered an interest in the Italian football team. The ambition to be a superhero demonstrates a developmental delay in terms of understanding the difference between fantasy and reality, which the student’s teacher voices as a concern (see section on teacher’s perspectives).

• A mummy (aged 8).

• Go to college (aged 19).

• A Gymnast (aged 13).

• A Nursery Nurse (aged 14).

• A Writer/Author/Film Director (aged 13).
• A Superhero (Spiderman) (aged 11).

• Don’t know (2 students aged 6 and 7).

• A Footballer (aged 10).

When asked about friendships, the younger students found it easier to name more than one or two friends, with the youngest (aged 6) naming most of her class and many of the staff based at the school as friends. One of the primary children talked enthusiastically about the other students in his class, but when asked to draw his friends, he found this difficult:

“I don’t know if I can draw them … because if they are there looking at me it’s easy, but if they’re not, it’s hard … I can only know how to draw me.” (aged 11)

Children in secondary education could name one or two friends, but one of them qualified this by saying:

“I’m not sure if you could call them friends, but I have people I hang around with if you know what I mean, they’re not like friends, I’m always falling out with them if you know what I mean.” (aged 13)

3. **The School Experience: Teacher Perspectives**

Teacher Perspectives - Confidence in Supporting a Student with FASD in the Classroom

When asked about their level of confidence in supporting a student with FASD in their classroom at the beginning of the project, most staff indicated a reasonable to high level of confidence with only 2 members of staff indicated a confidence level in the lowest two grades. At the end of the project all teachers reported that they had a better understanding of the student they are supporting. In particular teachers stated that they had a better understanding of some of the behaviour they observed in the student and how best to support the student in that area. Teachers reported that being involved in the project supported reflective practice, provided reassurance about effective practice, encouraged whole team discussions about the student in question, and highlighted the implications of FASD for an individual in all aspects of daily life.
Table 4: Confidence Amongst the Education Workforce in Supporting a Student with FASD in their Classroom

However, none of the teachers involved in the project had heard of FASD before engaging with the child they were currently supporting and were not aware of the wider issues such as complexity of family life or the impact on student behaviour.

Teacher Perspectives - Sources of Information about FASD

When asked by questionnaire whether staff had found any source of information particularly useful in enhancing their knowledge of FASD in order to support the child in their class, most indicated that a combination of the internet and discussion with colleagues had been useful (80%), although 40% also indicated that parents had provided information.

Table 5: Sources of Information about FASD
Teacher Perspectives - Areas of Learning in which a Student with FASD Needs Most Support

When asked by questionnaire which areas of learning a student with FASD would need most support in, most staff indicated that maths, behaviour for learning and literacy were particular areas of need (10 teachers for maths and behaviour for learning and 9 for literacy) with RE (1 teacher), ICT (2 teachers) and Art (2 teachers) requiring the least amount of support. The project literature review highlights maths and behaviour for learning as particular areas of difficulty for students based on previous research, as well as executive function and PHSE. (Eight teachers stated PHSE was an area where students with FASD would need support).

<table>
<thead>
<tr>
<th>Subject</th>
<th>No of Teachers who think this is an area of learning that a student with FASD would need most support in (n = 10)</th>
<th>No of Teachers who think this is an area of learning where a student with FASD would have strengths (n = 10)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Maths</td>
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<tr>
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<td>8</td>
<td>3</td>
</tr>
<tr>
<td>PHSE/Citizenship</td>
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<td>4</td>
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<td>PE</td>
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<tr>
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</tr>
<tr>
<td>ICT</td>
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<td>Geography</td>
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</tr>
<tr>
<td>Art</td>
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<td>8</td>
</tr>
<tr>
<td>RE</td>
<td>1</td>
<td>1</td>
</tr>
</tbody>
</table>

Table 6: Areas of Teaching and Learning where Students with FASD Might Need Support or Have Strengths

Areas where teachers felt that a student with FASD would demonstrate strengths were PE (6 respondents) and Art (8 respondents), whereas Geography, Languages, Behaviour for Learning and
RE scored very low in this area with only 1 teacher for each area indicating that this might be an area of strength.

It is interesting to note that although difficulty with maths is reported by both teachers and parents and some students, 3 out of the 9 students say that numeracy is a subject they enjoy. These include one student from each type of school involved (i.e. primary, secondary, and special).

When asked in interview specifically about the successes of the individual student they were supporting, teachers indicated the following areas of learning/curriculum subjects:

- Literacy, particularly reading, with students sometimes being above their chronological age in the area of expression, but often finding comprehension more difficult, (5 teachers) highlighting the general consensus amongst researchers and writers that strong verbal skills mask poor understanding. This was observed by the researcher in a secondary aged student during a small group guided reading session led by a TA. After reading a book about a family and their house, the student was asked to describe the house to which she replied “it is a small house”. When asked by the TA to find the page where the house was described as ‘small’, the student could not, but replied that it must be small as it had been described as “not much to look at”, demonstrating her lack of clarity between size and appearance of objects.

- Being enthusiastic about school (3 teachers).

- Contributing ideas in the classroom (1 teacher).

- Listening and taking part in lessons (1 teacher).

- Improved maturity and attitude in learning resulting in being able to sit still for 5 minutes in order to complete a task (1 teacher).

- Music (2 teachers), Drama (2 teachers), PE/Sport (2 teachers), Art (2 teachers), Technology and Food Technology, ICT.

When asked in interview specifically about the difficulties faced by the individual student they were supporting, teachers indicated that the following were particularly pronounced for students with FASD:

- Short attention span /inability to focus (6 teachers).
• Being small in stature coupled with immaturity, resulting in the tendency for peers to either “baby” the student or reject them socially (3 teachers):

  “With the other students, their intellectual and maturity level has developed a lot more and they’re going off on work experience and being prefects and being trusted with all sorts of things ... and they’re actually looking back at x and dismissing him, they’re almost a more of a ‘whole person.’ It’s as if he (the student with FASD) peaked in year 4 and hasn’t developed much since then. The other students are now almost anti-x because he’s so immature compared to them ... so they have shunned him, we have to have sessions to deal with this as they are now bullying him.” (Teacher in a Special School)

  “What enables children of any ability to cope in secondary (education) is emotional robustness with or without SEN, ... I don’t think x has that robustness, he’s so protected here and he thrives on that, his social and emotional skills are so far behind his academic skills and he’s even behind some of his peers in this setting in that area.” (Teacher in a Special School)

• Obsessions with objects, people and what other students are doing (constantly following other students, or asking what they’re doing) (3 students).

• Friendships and attachments with unsuitable peers who may lead the student astray (for example encourage smoking, drinking and absence from school) (2 teachers).

• Poor short term memory (2 teachers).

• Difficulty in staying on task without frequent and repetitive reminders/prompts (2 teachers).

• Rushing into things without a proper understanding of the task and ‘getting in a muddle’ (2 teachers).

• Requiring a lot of adult attention: teacher focussed rather task focussed (2 teachers).

• Sharing and turn taking with other students (2 teachers).

• Unusual levels of impulsivity, putting themselves and other students/staff in danger and requiring high adult to student ratios. (For example, one secondary aged student who is easily overwhelmed by visual and auditory stimulus has picked up jars of chemicals and Bunsen
burners impulsively and run across the science lab with them before staff can react. This level of impulsivity is difficult to risk assess for in a mainstream secondary setting) (1 teacher).

- Calling out repeatedly during lessons, interrupting teachers and distracting other students (1 teacher).

- Difficulty with anything which requires too many variables (1 teacher):

  “We were doing some work on subtraction and we were playing a game, where you had to pick up two numerals from two piles of cards and using a number line, starting with the higher number and subtracting the smaller number. There were too many variables, too many steps, although it seemed to be a nice game to be playing, when she came to record it, she was easily confused as to how to record it.” (Teacher in a Specialist Resource Centre)

- Being overwhelmed/over anxious when faced with new things including trips which can manifest behaviourally (1 teacher):

  “We went to see was Charlie and the Chocolate Factory and she was absolutely traumatised by it. When I spoke to her Mum later, she explained that she’s still at the Charlie and Lola phase and she’d never seen anything like Charlie and The Chocolate Factory before, she was screaming and crying because of the things that happen to the children in the film. So you have to really think about everything before you do it and consult with parents just to check things out, so when we found out that we were doing the Grinch, we made sure we talked it through with Mum so that we were all saying the same things.” (Teacher in a Specialist Resource Centre)

- Hyperactivity and linked to this impulsivity (see above). This can mean in the most extreme case that achieving a focus of five minutes at a time and sometimes five minutes within one day is seen as a success (1 teacher).

- Inappropriate interactions with other vulnerable young people requiring 1:1 supervision in all areas of school life (ranging from comments/conversations of a sexual nature to exposure). From a school point of view, this has implications for work placements for secondary age students undertaking further education as it can be difficult to find opportunities where the student can be supported appropriately and safely. This obviously has implications for future
Teacher Perceptions - Practical Classroom Resources/Teaching and Learning Strategies

When asked by questionnaire and interview what practical resources/strategies might ideally be placed in a classroom to support a student with FASD, the following ideas were suggested by staff:

**Teaching and learning strategies**

- High adult to child ratio (ideally 1:2 or 1:1) (7 teachers).

- Provision of a home-school link book to ensure frequent and effective communication between home and school (2 teachers).

- Constant and frequent repetition of instructions and tasks – verbal/written (3 teachers).

- Immediate and frequent praise (2 teachers):

  “*When we went to the church for Easter celebration, then he had a whole new sticker card just for that event, and I think he earned 10 stickers just for that one event, then he could have a prize; so lots of praise, more so than I would do for other children, but it has to be discreetly done.*” (Teacher in a mainstream primary school)

- Signing as well as saying (1 teacher).

- Taking the activity to where the student is at if this is the only way to engage them (1 teacher):

  “*Guided reading will happen in the book corner if that’s where he says he would like to read and he’s comfortable. Then it’s done in a reasoning way: ‘If we read in the book corner today, then tomorrow we’re going to read at a table.’ Or even smaller than that really: ‘We’ll read in the book corner now, but next lesson we’re going to work at a table,’ and it’s that sort of thing.*” (Teacher in a mainstream primary school)

- Provision of an “Educational Nurturer” so the student had an adult with whom they could form an attachment and feel safe and calm enough to learn (1 teacher).

- Planning ahead for trips and outings, and including parents in the planning (making books with photographs about the trip; talking to the student about what they will experience on the
way and when they get there; preparing scripts and social stories to rehearse; using puppets to explore experiences) (1 teacher).

- Positive language (i.e. first this, then that, tell the student what you want them to do, not what you don’t want them to do) (1 teacher).

- Adult prompts to encourage the student to stay on task (extrinsic motivation) (1 teacher).

- Scribing for the student to reduce the necessity for them to write at the same time as listening and looking, which can cause sensory overload, increasing the likelihood of hyperactivity, inattention, distractibility and outbursts (1 teacher).

- Being creative about how progress is recorded, for example photograph and video (1 teacher).

- Good communication between staff about the student’s difficulties and needs (1 teacher).

- Independent Learning Box containing items that engage that individual child and interest them such as number lines and number counters (1 teacher).

- The use of ICT to increase motivation and aid understanding; for example, interactive whiteboards and computer based activities which provide immediate and visual feedback (1 teacher).

- The use of puppets, role play and scripts – to develop confidence and social and emotional skills. These need to be practised often in order to embed knowledge in the student’s memory (1 teacher).

- Adults to model an activity (show rather than tell) (1 teacher).

- Resources to assist with the interpretation of facial expressions/moods and body language such as emotion cards and games (1 teacher).

**Environmental considerations**

- Routine and structure, clear expectations, and breaking tasks down into small steps (9 teachers).

- Visual prompts/aids (including visual timetables, task management boards, sand timer, cue cards, objects of reference, a clear list of class routines in a visible place as a reminder for
students, a colour coded print out of timetable for student’s personal use) (6 teachers).

- Reducing distractions in the environment, including noise, light, auditory distractions, smells, etc (4 teachers).
- Small class sizes (6 – 8 children maximum) (3 teachers) or small group work.
- Kinaesthetic, tactile, concrete resources and learning opportunities (3 teachers).
- Play based, secure environment to allow the student to explore naturally (1 teacher).
- Sensory box/tactile resources to encourage exploration through senses and manipulation and facilitate kinaesthetic learning including a range of sensory equipment suited to the individual child (1 teacher).
- Personal space and time for student to cool off when upset or distressed (time out/quiet room/space) equipped with earphone, calming music, lavender (1 teacher).

When asked what teaching and learning strategies had been useful for students with FASD, a range of ideas were put forward by teachers, which were incorporated into the Primary and Secondary Frameworks resulting from this project. The teachers worked with a prototype of the Frameworks, which have been improved and amended according to feedback from teachers and other professionals. An example of the Secondary Framework can be found in Appendix C of this report.

**Teacher Perspectives - Issues in Teaching and Learning**

When asked what the most important issues for teaching and learning for a student with FASD were, the following ideas were suggested by education staff:

**Teaching and learning issues**

- Ensuring that the student has understood instructions through the use of questions. This is best achieved by asking the student to repeat instructions in their own words ensuring that they have understood and processed the information, rather than simply repeating what they have heard.
- Keeping the student on task.
- Allowing for the student’s short attention span by breaking tasks and instructions down into
small steps and using simple language.

- Understanding the student’s low motivation and self esteem.
- Understanding that changes to schedule are disruptive and disorientating.
- Awareness of social issues and lack of confidence.
- Maintaining a positive attitude and encouraging the student to maintain relationships with peers and staff.
- Allowing sufficient time to explain tasks, for the student to process information, for the teacher to plan for the student, for the student to complete tasks.
- Flexibility in curriculum and teaching methods, ability of staff to make reasonable adjustments.
- Clear routines and expectations around behaviour.
- Recognition of students’ strengths and building self esteem through praise.
- Differentiation of tasks, groups, resources, teaching styles, homework.
- Listening to the student and the need for adults to be patient.
- Understanding of the uneven learning profile of students with FASD.
- Developing confidence in group situations.
- Removing uncertainty about instructions, rules, tasks by giving clear instructions.

**Environmental issues**

- Understanding sensory processing difficulties, such as students being ultra sensitive to texture and light as well as noise and odours.
- Sitting the student away from distractions.
- Understanding that the student can be over sensitive and picky/has obsessions.
- Observing for signs of shut down or switch off.
- Allowing for student’s inability to focus or follow instructions and mood swings.
- Enjoyment of school related to success, creating a positive and happy learning environment.
- Recognising signs of particular behaviour, particularly in relation to emotions.

Teacher Perspectives - Life Skills

Teachers indicated that students with FASD were generally capable in the area of life skills in the school environment, although one of the younger students (aged 7) had some difficulties in the area of toileting and the ability to understand relationships with adults. Difficulties with telling the time (9 teachers) and understanding money (2 teachers) were highlighted. Organisational skills (such as arriving at lessons with the correct equipment at the correct time, arriving at a lesson and getting equipment out of their bag in readiness to learn) were also an area of difficulty for students (8 teachers).

Teacher Perspectives - Peer Relationships

In relating the ability of students with FASD to interact equally and appropriately with peers, all 9 teachers reported this as being an area of difficulty for the student they are currently supporting, indicating that this is an area that they focus on in life skills/circle time/PHSE and nurture group time. Specific difficulties include:

- A gap between the student and his/her peers in the area of social and emotional development and level maturity which is getting wider (4 teachers).
- Playing alongside rather than with or on an equal basis or interacting on an unequal basis. Other students may move onto another topic or game and the student with FASD will be left behind (3 teachers).
- Not understanding the rules or social aspects of games and students may “baby” the student with FASD (3 teachers).
- Being mean to others and bullying those seen as being weaker (3 teachers).
- Insecurity in friendships, constantly asking others if they are her friend/will be her friend, causing irritation (1 teacher).

3 Nurture groups are small classes in infant and primary schools for students with social, emotional, behavioural and learning difficulties. There are also nurture groups in secondary schools, but these are less common. A central aim of nurture groups is to provide students with a secure and safe environment that provides the conditions for them to develop emotionally, socially and cognitively (Boxall 2002).
• No understanding of other people’s feelings (1 teacher).

• Finding it difficult to manage conflict with peers well and looking to adults to sort things out making it difficult for the student to form relationships with peers of the same age (1 teacher).

Teacher Perspectives - The future

Teachers reported that the future, specifically, post compulsory education when students will be making the transition from child to adult services, was an area where they had particular concerns for students with FASD. They indicated that the following support package would need to be in place to effectively include individuals with FASD in society:

• Advice and support for parents about the range of services available and how to access them (9 teachers).

• A complex where students can enjoy a degree of independence, but have access to support/services (supported living with supervision), access to suitable training and supported employment opportunities (7 teachers). This is echoed by parents.

• Continued assessment, monitoring and support (7 teachers).

• Help with understanding everyday things like money (3 teachers).

• A family support work/parent partnership worker (2 teachers).

• Multi-agency support, communication, consistency, long term relationships with someone who can understand the complex needs of students with FASD (1 teacher).

Researcher Observation: Engagement in Learning

Engagement in learning is important because in general, students learn best when they are interested, involved and appropriately challenged by their work – when they are engaged with their learning. Where pupils are actively engaged in their learning, they:

• Have a longer concentration span.

• Complete work on time.

• Stay on-task and have few behaviour problems.

• Maintain a good attendance record.
Consequently, they:

- Develop higher self-esteem.
- Make faster progress.
- Develop a belief in their ability to improve and learn.
- Encourage and work well with other pupils (DfES 2004).

Thus, levels of engagement in learning are an important indicator of whether a student may make satisfactory progress at school in a range of areas. This is particularly important for a group of learners who are often described as having difficulties in the area of attention and concentration and ability to stay on task.

Engagement has been described in a number of ways (see Brooks 2010). For the purposes of this group of students, the following definition was deemed appropriate as it allows for the range of learning experiences which may be observed across the age and curriculum range of the students, whilst acknowledging that students may be functioning at a developmental level which is different to their chronological age “developmentally appropriate interactions with the environment, including materials and people” (Bailey & Wolery, 1992; McWilliam & Bailey, 1995; Ridley, McWilliam & Oates, 2000).

In order to assess engagement in learning, it is important to consider the different recognised forms of engagement and how each form is characterised and can be observed and recorded:

**Behavioural engagement:**

- Positive conduct, rule following, adhering to norms.
- Involvement in learning tasks, effort, persistence, attention, class participation.
- Participation in school-related activities.

**Emotional engagement:**

- Affective reactions in the classroom: interest, boredom, happiness, anxiety.
- Affective reactions to the school and/or teacher, identification with the school.

**Cognitive engagement:**

- Investment in learning, learning goals, intrinsic motivation.
- Self-regulation, being strategic. (Fredericks et al 2004)

Simple engagement scales were developed in order to assess elements of behavioural, emotional and cognitive engagement. These required researcher observation to assess whether the student was engaged or not engaged and comment separately on activities which occupied the student’s attention when not engaged. This helped to highlight students’ conduct within the classroom, their affective reactions in the classroom as well as involvement in learning tasks, intrinsic motivation and self regulation. Inter-rater reliability was provided by Dr. Tamara Brooks, (Brooks 2010) who has an interest in and experience of engagement for learning in students with Autism. This provided an inter-rater reliability rate in terms of whether a student was engaged or not engaged of 90% in a range of learning situations (including group work, 1:1 work, student choice time and ICT work).

Levels of engagement varied principally according to the type of setting and can best be shown for individual students and type of setting visually. For individual students, please refer to the case study profiles in Appendix B. As can be seen from the following pie charts, different patterns of engagement can be observed between special education, mainstream primary and mainstream secondary. Higher levels of engagement were observed in the areas discussed above more often in mainstream primary and special education than in mainstream secondary education. The pattern of engagement is skewed by one of the students in mainstream primary education, as the school are endeavouring to find the appropriate level/classroom to suit his needs. In addition, his unusual levels of hyperactivity mean that 5 minutes of focus at any one time (sometimes in any one day) is seen as a success. In special education, the students were observed in small class sizes (8 – 10 students) with high adult to child ratios, signing as well as saying for the younger students, the use of concrete, tactile and visual resources to support explanations and task completion and a degree of independence for the student when deemed appropriate. In primary education, the students were observed in class sizes of between 13 – 30 students, supported 1:1 by a teaching/learning support assistant or high adult to child ratios, a differentiated curriculum and the use of visual prompts such as timetables, concrete, tactile visual resources to support explanations and task completion. In secondary education, the students were observed in class sizes of 30, with access to a teaching assistant in the classroom for the student to access if they needed support in 2 cases and an additional
teaching assistant to support the student in question in the other. From researcher observation, the use of an interactive whiteboard and some concrete resources were evident, but on the whole there was less emphasis on visual reinforcement, concrete examples to support teaching and attention to the environment in secondary education than in primary or special schools. This differs for one student within a secondary school, however, who has strategies in place such as visual timetables, access to therapies to support sensory and social and emotional needs, as well as a differentiated curriculum with high levels of adult support where deemed appropriate. This student demonstrated higher levels of engagement on observation than the other two secondary aged students. However, whilst she was engaged in learning, which was evident from the high number of questions she asked during lessons, the questions she was asking were not always strictly relevant to the topic.

The pie charts overleaf show engagement by type of education for comparison. Engagement levels for individual students can be seen in student profiles in Appendix B.

In terms of emotional engagement within school (reactions to school), all students were provided with the opportunity to discuss their school experiences with the researcher, which highlighted to some extent students’ enthusiasm for school. The discussions were not aimed at assessing emotional engagement, but rather an attempt to discover the ideal teaching and learning environment for students with FASD. It is interesting to note that, of those students with whom a discussion was possible, only 2 of the students did not relate unqualified enthusiasm for school, though all students were able to discuss subject/curriculum areas which they favoured over others (discussions were not possible with 1 student attending mainstream primary education and 1 student attending special education for reasons explained in the section on methodology). None of the students related negative experiences involving any member of staff within their school, and all students with whom a discussion was possible talked positively about school related activities such as after school clubs, lunch time activities, activities off site, etc.
Engagement in Special Education:

Engagement levels in special education for the three students involved in the project is 88% or above. The 3 students attending special education range in age from 6 to 18.
Engagement in Mainstream Primary Education:

Engagement levels in mainstream primary education for the 3 students involved in the project at this chronological age is mixed, ranging from 50% to 100%. The 3 students in attending mainstream primary education range in age from 7 to 9:
Engagement in Mainstream Secondary Education:

Engagement levels in mainstream secondary education for the three students involved in the project ranges from 40% - 67%. The 3 students attending mainstream secondary education are aged 13 - 14.
**Perceptions from Trainee Teachers**

Trainee teachers from the University of Worcester stated that they perceived the project to be important in terms of raising awareness of the issues relating to FASD, and were surprised that so little research had been carried out in the UK:

“*It’s the fact that the children (with FASD) look the same as other children, it’s not a visible physical disability, you can’t see the brain, so everyone will assume that these children are OK, but their difficulties are hidden, the damage is so serious but its hidden.*”

“What hits me is the lack of research into FASD in this country considering the binge drinking culture we have; we should be at the heart of doing research in this country.”

They also expressed a desire to see more education aimed at women about the effects of alcohol on the foetus, and thought that it would be difficult to include a student with FASD in a mainstream setting, particularly when there is so little knowledge throughout the education workforce about FASD and the implications for students and their families:

“This one (FASD) is preventable and the government or someone should do more to educate people. I know it’s in the media about people drinking, but it’s not just in education, it’s a societal issue. and we have to think about future generations.”

**Impact of the Project: Participant Perceptions**

Teachers were invited to take part in a final interview at the end of the action research cycle in order to evaluate the impact of the project on inclusive practice, and reflect on the advantages and disadvantages of being involved in an educational research project of this type. All 9 schools agreed to participate.

**Expectations**

In terms of teacher expectations at the beginning of the project about what was involved in the project, what the benefits and implications would be, teachers outlined the following:
• Develop my knowledge of FASD/raise awareness of FASD within the school (8 teachers).

• Receive ideas and strategies for teaching and supporting students with FASD (7 teachers).

• Enable my practice to evolve (2 teachers).

• Share good practice from this school with other schools involved (2 teachers).

• Build on what this school is already doing (2 teachers).

• Receive support (1 teacher).

• Provide the opportunity to reflect (1 teacher).

• See what other schools were doing (1 teacher).

All teachers stated that expectations had been met, commenting specifically:

“*It’s helped to know that we’re doing the right thing*”. (3 teachers)

“*Awareness has been raised*”.

“I have improved my knowledge of FASD and how to teach a child affected*”.

“*Having a reason and focus for trying new ideas was good*”.

“We have more understanding as a school of why the child does what he does*”.

“You did exactly what you said you were going to do*”.

“We’re thankful for the knowledge we’ve gained*”.

“We think a lot more about what we do with the student and how what we say to him affects his behaviour*”.

**Benefits of Involvement in the Project/Capacity Building**

All teachers could highlight benefits of being involved in the project, although there was variation as to what the advantages had been to the student, school and professional practice as some teachers said that many strategies suggested in the frameworks and by the researcher are embedded in their
inclusive practice. On the other hand 2 teachers have stated that completing the feedback sheets fortnightly for the researcher provided them with the opportunity to reflect on what they were doing with the student in question, think about other ways forward and formally evaluate strategies tried, which “is a luxury in the classroom”. Both of these teachers said they would like to continue to do this in future years and do it for more students, time allowing, which implies that some elements of the action research cycle may become embedded in practice in some schools. All 9 teachers stated that the project had been a positive experience in terms of their own professional development. Teachers have highlighted the following benefits:

**Benefits for Students**

- The information and knowledge gained from the project will be useful for other students within the class/school.
- IEP targets for the student have improved, they are now more achievable, and as a result student self esteem has improved.
- The student has more opportunities within school, including being able to participate in external trips.
- The student is less aggressive and has fewer outbursts due to a re-framing of behaviour management strategies (the student now sees the quiet room as an opportunity for him to manage and regulate his own emotions, rather than as a punishment).
- The student knows that people are interested in FASD and want to help improve things. This is good for her self esteem and gives her hope, helping to make her feel less isolated.

**Benefits for Professional Development/ Capacity Building**

- The knowledge gained from being involved in the project will be passed on to other teachers within the school (3 teachers)
- The knowledge gained will be passed on to other professionals outside the school and as the student is making the transition to adult services, the school has used the feedback sheets from the project to inform them about the student’s needs.
- Confirmation that the teacher/school is doing right thing for the child/reinforcing good practice (2 teachers).
• The teacher has been able to think and reflect more about the specific needs of the student, particularly in terms of behavioural issues (2 teachers).

• The teacher will take the knowledge gained from the project to her next school.

• The outcomes of the project will provide the opportunity for a whole school meeting about FASD.

• It’s been good for the student that parents, teachers and the researcher are working together to raise awareness and improve knowledge.

• For some teachers the frameworks have highlighted the need to observe and plan for students in a more holistic manner rather just in terms of academic curriculum achievements.

• Eight teachers said that their knowledge and understanding of action research had improved with one teacher saying that before being involved in the project, she had “no idea of the amount of work involved in a project like this and that’s been good to see.”

On the whole teachers agreed that their knowledge of supporting a student with FASD had been improved by being involved in the project, saying that it had supported reflective practice, provided reassurance about effective practice, encouraged whole team discussions about the student in question and highlighted the implications of FASD for an individual in all aspects of daily life. They also concurred that this body of knowledge is importance for initial teacher training and continuing professional development and would like to see FASD covered on SENCo training and ITT courses throughout the UK. Trainee teachers involved in the project focus group concur, saying:

“I feel that it should be widely used amongst teachers, students and parents. The need to make people more aware of FASD is essential and I do not think it should be limited to only those within the education department/profession.”

“I think this is an excellent framework that would support a variety of professions working with children with FASD.”

In terms of disadvantages to being involved in the project, all teachers stated that finding the time to complete the feedback sheets to inform the project could be difficult, and some commented that they would have ideally preferred more time in between being invited to participate in the project and the requirement to familiarise themselves with the framework and implement it within the classroom. Despite this, all 9 teachers stated that they were would be prepared to be involved in future projects,
even those who had been apprehensive at the beginning of the project about what the expectations of the researcher might be.

**Evaluation of the Frameworks: Participant Perceptions**

All 9 teachers undertook an evaluation of the Frameworks developed from the project. In addition, the frameworks were evaluated by two trainee teachers from the University of Worcester, the English Curriculum Adviser for Manchester Health Academy and a Senior Lecturer (SENCO) for the Department of Education and Children’s Services at the University of Chester (in consultation with trainee teachers). They were also considered by an Occupational Therapist, a Speech and Language Therapist for the National Health Service, the Principal Speech and Language Therapist (Orofacial anomalies) and a Consultant Clinical Geneticist at Birmingham Children’s Hospital, all of whom have provided feedback and suggestions for inclusion in the material.

A total of 14 evaluations have been received to date.

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<th>Aspect of Use</th>
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**Table 7: Participant Evaluation of the Frameworks**

All 14 practitioners found the frameworks to be pleasing in appearance and 14 found them easy to use with 2 finding them reasonably easy to use. In terms of effectiveness, 14 practitioners found the frameworks effective with 1 teacher in a special school and 1 teacher in a specialist resource centre stating that the effectiveness for them was reduced by the way in which they already work with the child in question which they feel encompasses many of the strategies suggested by the frameworks.
They did feel, however, that the frameworks had reinforced their practice and given them the confidence to know that it was effective.

Comments on the Frameworks

Appearance

Suggestions for improvement on the appearance of the frameworks included:

- More use of pictures and diagrams.
- Keep the photographs, but make them age related.
- Reduce the repetition between areas of difficulty.

Ease of use

Suggestions for improvement regarding the ease of use of the frameworks included:

- Add a contents/index page.
- Add colour coding for sections and adding a contents page.
- Identify transdisciplinary criteria and suggested approaches within the framework.

Effectiveness

Suggestions for improvement and general comments on the effectiveness of the frameworks included:

- Add a lesson plan to show how differentiation was applied in a practical context.
- Add strategies for whole group situations.
- Mention the provision of a key worker whose role it is to take responsibility for the home-school link and be familiar with the frameworks.
- The strategies would be more useful to those who have no knowledge of the children they are receiving (Specialist Resource Centre).
- The framework was not helpful as the school already uses most of the strategies, and others were not appropriate to the child we are supporting (Special School).
General improvements for the future

In terms of general improvements and comments on the frameworks, the following suggestions/comments were made:

- Include case studies of individual students in order to profile teaching and learning strategies.
- Include more about how to work with parents, and a section specifically for parents.
- Include teachers’ experiences of which teaching and learning strategies have worked with individual students.
- Include examples of how techniques could be used in best practice in a mainstream secondary school.
- Reduce the amount of repetition between areas of difficulty as this makes it weighty and wordy.
- The frameworks need to be suited to the way a school works.
- Some of the strategies need to be adapted for special school education as they are aimed more at mainstream situations.
- It would be useful to have these materials in different formats such as power point for ease of delivery and handout/leaflet style so students can take information away with them into school.
- Include ideas/activities for ITT students to support understanding of this subject.

Inclusive practice

In relation to inclusive practice, the following comments were made (all comments are made by teachers or trainee teachers, unless otherwise stated):

“This document helps professionals understand the condition and better cater to the needs of individuals, and also to recognise the condition in pupils.”

“It was very helpful in helping to focus lesson planning and assessment and to consider the
impact of work.”

“The framework helps to give teaching staff ideas of how to make the curriculum more inclusive for these children. All of the strategies suggested are fantastic, but overwhelming in some school situations where staff must ensure that the curriculum is presented at a faster pace to cater for children of higher abilities.” (Speech and Language Therapist)

“Hyperactivity and sensory needs are inter-related and should therefore be linked in the frameworks. Sensory needs nearly always involve a LOT of behaviours relating to difficulty processing movement input, such as sensory seeking (hyperactivity), distractibility and irritability.” (Occupational Therapist)

“It provides a useful checklist for inclusion. The framework will help teachers to understand or realise why some children act differently, as it is not always physically noticeable. Therefore, they will be able to take appropriate action.”

“I think the framework is very supportive and is a great guidance for a variety of professions that will work with these children. In relation to inclusion, I think the framework has outlined a diversity of ways for children with FASD to be included in the learning environment.”

“The framework is a helpful addition to professional development for existing staff and trainees. It will be used to inform staff and can be used for a range of children, not just those with FASD.”

“The framework hits the key issues really well and covers all the possible strategies that could be tried. The key is to know your individual student well enough to know which strategies are likely to be needed and when.”

“Students (trainee teachers) gained much from the sessions from the material in the guiding principles page. Many asked about diagnosis and explained that many SENCOs in school had not heard of FAS and would like more information, so felt that the physical features page was very useful and the section on ‘pronounced differences’ again was of benefit.” (University Lecturer)

“It hasn’t changed the way that we work but this might be because of the amount of input we have received from the parents. It could be really useful for the receiving teacher – to give them an insight of how things could be/might look.”

“By following the strategies (depending on the needs of the individual) it gave the individual a
better chance of staying included as part of the group and feeling positive about how they are managed.”

“The framework has enabled me to involve the student in a number of curricular as well as extracurricular activities and visits. These have included visits to places such as a synagogue and busy farm shop with many members of the public. Using the framework I was able to trial strategies and ideas discussed in order to find something myself, other members of staff and the student were comfortable with. As a result of this the student was able to access and enjoy these activities and visits alongside the other children. A huge success!”

“The framework gives the child involved complete access to inclusion and promotes the strategies to bring out the best in the child in question – this can only be a good thing!”

“The most important thing I feel for any child is that the approach is adapted to their needs and we feel the framework could be an excellent starting point for finding out what works for a child and giving teachers ideas.”

“It has worked well in my class where the students have a variety of needs. It has been particularly inclusive because the suggestions and strategies have been suitable to try with the other students as well.”

**Project Dissemination**

Dissemination of the aims and projected outcomes of this project has been ongoing throughout the duration of the project and will continue beyond the life of the project (see Appendix D). Conferences and training events within local authorities, charities, schools and universities have provided dissemination opportunities for the Researcher and Project Director to over 800 professionals from a range of disciplines in a variety of settings to date.

Both the Researcher and Project Director have been surprised by the number of professionals who said they had no prior knowledge of FASD, and felt that they would have been ill equipped to support a student (and their family) within their setting, given this lack of knowledge. This concurs with parents’ perceptions about the paucity of knowledge amongst professionals, and reinforces the need for this project and further research.
Discussion of Findings

This project demonstrates that students with FASD have a range of practical strengths which can be observed and recorded within the school curriculum. This presents society with opportunities for inclusion on a number of levels. However, including students with this condition in all aspects of the UK national curriculum within the full range of educational provision available in this country poses challenges for teachers as well as opportunities, as “the difficulties that children face in the classroom epitomise that much-used phrase ‘complex needs’” (Dittrich and Tutt 2008, Carpenter 2009). This is acknowledged by the inclusion of students with FASD in Specialist Schools and Academies Trust’s Complex Learning Difficulties and Disabilities Project (CLDD) (www.ssat.org.uk). The complexity of needs for these students lies not only in the range of learning difficulties highlighted in the pages of this report, but also in the compounding factors such as overlapping and co-morbid conditions, their personal family history which may involve multiple foster and/or adoptive placements, their lack of ability to acquire basic life skills, difficulty in interacting appropriately and on an equal basis with peers, the potential isolation and loneliness borne from being the only student in a school with this condition, lack of knowledge about the condition within the education, health and social care systems and society in general, and the hidden nature of their difficulties. This makes students particularly vulnerable at all ages and stages of the education system and in life generally, and this is certainly a concern shared by parents and teachers alike. Indeed lack of knowledge about students with complex needs and the implications for inclusive practice are highlighted in the Salt Review (2010):

“Anecdotal evidence suggests that the increasingly complex needs of SLD/PMLD pupils are not always understood and therefore not always being met” (p.3).

It is noteworthy that 3 out of the 9 schools requested the presence of the researcher at students’ annual reviews. This is not because they have insufficient knowledge about the child with whom they are working, but is a reflection of the appreciation amongst the 9 schools involved in this project that this condition is complex, and there is much for teachers to learn about the neuro-psychological aspects of FASD. This is important as an understanding of ‘neurodiversity’ in the classroom (McPhillips et al 2010), where teachers have an increased awareness of the scientific basis of biological diversity and how it relates to the needs of their students invites schools to personalise learning (ibid). This can only improve the school experience for students with FASD.

Students placed in primary and special schools are generally engaged with school and the curriculum, cognitively, behaviourally and emotionally. Students of secondary age in mainstream
education are generally emotionally engaged with school, but, on observation, the 2 students were cognitively or behaviourally engaged only for approximately 50% of the time. This reinforces parents’ and some teachers’ assertions that important teaching and learning strategies/environments include small class sizes, high adult to child ratios, adapting the physical environment and the use of concrete visual resources to support teaching and learning. This is an area where future studies could usefully be conducted to investigate the effectiveness of interventions and strategies which may increase motivation and engagement levels in order to improve life chances. These may usefully include therapeutic approaches as well as academic approaches aimed at improving working memory, organisation skills, peer relationships and social emotional development and resilience.

As can be seen from the student profiles in Appendix B of this report, students with FASD can seem able and be working at an appropriate curriculum level for their age. Indeed, teachers in special schools have commented in conversation with the researcher that the student with FASD is amongst the most able in the classroom. This does not necessarily reflect their skills in other areas, however:

“Tha’t’s where children like x fall down, he seems like he’s doing well and he’s got it sussed. He sounds like a capable student, but he can’t separate fact from fantasy. He lives in a world of Disney and make believe. He really believes he can be a Superhero, and his understanding of fantasy is comparable with that of a 4 year old.” (Teacher of a student aged 11)

In addition, needs for this group of students can include complex medical and health needs, making some students physically as well as emotionally vulnerable.

O’Malley (2009) advocates the use of vocational tests or adaptive behaviour tests to assess needs for individuals with FASD in order to:

“. ..bring to the table the plea of FASD being recognised as a social learning disability because intellectual disability is led by IQ tests, but a social learning disability does not need IQ to lead it.”

Cooper and Tiknaz (2007) argue that:

“Traditional approaches to curriculum are narrowly defined, and focus on defining what students are capable of doing by the end of certain stages in their school life in cognitive terms. This term is very broad and can be used to refer to a variety of features of the learning process such as perception, attention, information processing,
memory, reasoning, problem solving and organisation of thinking. These elements of human learning do not represent a comprehensive account of this area and what is missing is an appropriate emphasis on social and emotional dimensions (p.30).

Focussing on cognitive ability for many students with FASD would seem to be distracting from the pronounced areas of need for students with FASD in light of the evidence from this project, which suggests that strengths are mainly in practical areas. In addition, the need emphasised by parents and teachers for more focus on social and emotional ability for these students would seem to call for teachers to engage with students with FASD in way that emphasises their practical skills and strengthens their social and emotional development. This would fulfil what Bruner and Haste (1987) describe as ‘calibration’, whereby educators adjust their patterns of engagement with students according to their assessment of students’ performance characteristics. Linked to this, the ability to consolidate new memories or connect new knowledge with existing understanding, is an area of difficulty for students with FASD. The ability to make such connections is central to the process of cognitive development (Cooper and Tiknaz 2007). This has implications for students with FASD across the curriculum, but is evident for some of the students in this project in their inability to link information from sex education lessons to messages about appropriate interactions with others, and has implications about how these aspects of the curriculum are delivered and managed before and after delivery to protect both the student and their peers.

Students with FASD are at risk of developing secondary disabilities if sensitive and appropriate support packages are not received in their early years and primary education, one aspect of which is mental health problems. Mental health problems affect 30 – 40% of all children at some time during childhood (Carpenter et al 2010). The British Medical Association estimates that 20% of young people (11 – 16 year olds) experience a mental health problem at some point during their development and 10% present with a ‘clinically recognisable’ mental health disorder (including emotional disorders such as anxiety, phobias and depression, self harm and suicide, conduct disorders, hyperkinetic disorders, autistic spectrum disorders, psychotic disorders, eating disorders and substance and drug abuse). Twenty per cent of this group are diagnosed with two or more of these disorders.

It is noted in the project literature review that for students with FASD, this figure rises to 87% of individuals with FASD experiencing poor mental health in adolescence and adult life, leading to the risk of suicide (23%). One student on this project has been identified by Dr. Mukherjee as being at risk of developing mental health problems at the age of 13 due to her complex needs. She has been
identified as needing medication to manage her anxiety levels. This can have a significant effect on engagement with the curriculum and learning. If a student is depressed, for example, this impacts on their ability to pay attention and access memories, allocate sufficient resources to tasks because they are distracted by negative thoughts (Ellis and Ashbrook 1988), and demonstrate enthusiasm for learning and socialising. Generally students who are depressed engage less efficiently than students who are not depressed (Cooper and Tiknaz 2007). Anxious students on the other hand may display a range of attention problems, such as narrow attention span and distractibility. Anxiety and worry can have a negative impact on information processing, motivation and memory (Eysenck and Calvo 1992; Eysenck and Keane 1995). Teachers supporting students with FASD, therefore, will need to be aware of mental health issues, how these may manifest in students and how best to support a student with organic brain damage and compounding mental health difficulties, so that they can “lift children and young people from vulnerability to positions of resilience” (Carpenter et al 2010).

In her response to Professor Barry Carpenter’s CLDD Think Piece 2 (The Student/Child Population) Sally Thorn, (www.ssat.org.uk) suggests that students (with complex needs) may need one or a combination of:

- A modified statutory curriculum.
- A personalised curriculum.
- A therapeutic curriculum.

Students in this project are certainly accessing one or a combination of these approaches, particularly where sensory processing difficulties have been identified, which can magnify the need for therapy to be combined with a personalised approach to the statutory curriculum (see student 6 in the Appendix B). Interestingly, this student demonstrates a higher level of engagement in lessons on researcher observation than the other two students placed in mainstream secondary settings. O’Malley (2009) advocates in particular the use of Music Therapy as it provides individuals with FASD with:

“... a voice for feelings they don’t know they have, and empowers them to find them (feelings). It gives the children a language that they didn’t have, ameliorating the effects of organic brain damage. Different instruments provide different voices for children who can’t express their feelings (e.g. drums for aggression).”

Referral to therapies such as this often requires schools to request that an Occupational Therapist
provide a sensory profile for students, and this is certainly something that the researcher has suggested to more than one school in the project after observing students who appear to be overwhelmed by noise and distraction. Such services are often in demand, however, and it is not uncommon for schools to be allocated a quota of hours for an OT, necessitating schools to prioritise those students who present with the greatest need behaviourally. The needs of students with FASD do always manifest themselves behaviourally and as one SENCo noted:

“The difference between x (student with FASD) and students with ADHD or ASD is that x is no trouble to anyone but herself. She doesn’t present a challenge or difficulty to other students.”

However, this student does present with hyperactivity and distractibility in the classroom, which can be related to sensory processing difficulties:

“Sensory needs nearly always involve a lot of behaviours relating to difficulty processing movement input, such as sensory seeking (hyperactivity), distractibility and irritability.” (Occupational Therapist, commenting on the FAS-eD frameworks)

There are also implications for the health service in relation to students who have sensory processing disorders, particularly if this is not identified when the student is assessed and diagnosed:

“The Health Service in the UK reporting more 12 and 13 year old girls with ruptured bladders because of sensory integration disorders ... there is a disconnection between the need to urinate and the act of urinating.” (O’Malley 2009)

Parents and teachers agree that the provision of supported/sheltered living accommodation, possibly with work and leisure opportunities on site, where individuals may have a degree of independence at the same time as being able to access assistance with daily living skills will be necessary as students leave formal education at the age of 19. The necessity for ongoing multi-disciplinary assessment of needs in order to ameliorate the potential for further difficulties to develop as students mature is clear.

**Conclusion**

The educational implications of FASD in the context of the UK education system would seem to be that a range of teaching and learning strategies and appropriate environments are employed by
teachers to support students with FASD, some of which are highly effective. However, there are others which do not seem to provide sufficient opportunity for students with FASD to engage effectively in learning in order to make satisfactory progress, particularly in the areas of social and emotional development and general life skills. This could significantly impact on students’ propensity to develop secondary disabilities, as the inability to form friendships and effective peer relationships can impact on mental health in adolescence and later life. Teaching and learning strategies/environments that effectively support students with FASD are appropriate for a range of students and have been described by some teachers as “just good practice”. The range of needs for students with FASD should not be over-simplified, however, as understanding of compounding factors and complexity of needs throughout life cannot be stressed enough and should not be underestimated as:

“The child in front of you is bringing you a history, it is important to be sensitive to that and sensitive to the strategies that you use.” (O’Malley 2009)

For this reason, the relevance of this body of knowledge to Initial Teacher Training (ITT), and Continuing Professional Development (CPD) is significant. It is important that teachers at all stages of their careers are aware of the needs of this group of students, alongside other more well known causes of learning difficulties and disabilities, in order to have a starting point in the classroom, to know how to adapt teaching and learning strategies/environments when something does not work and to be aware of the most supportive way of working with families.

A range of professionals is likely to be involved in the assessment of needs and resulting support package offered to students of FASD, and it is necessary, therefore, for teachers to be aware of the roles of such professionals in order to ensure that the advice and support they offer in the classroom can be utilised effectively to optimise engagement and learning opportunities for students. It is also important that the professionals who support teachers and schools are knowledgeable about the needs of students with FASD and their families, so that parents/carers can concentrate their efforts on parenting, without feeling the necessity to educate the professionals who would wish to support them.

Teachers will also need to be mindful about hearing the voice of students with FASD from the students themselves. Students with FASD are ambitious and have views which they are happy to express about their education in terms of what does and does not work in the classroom for them and what they would like to be in future years. Curriculum, whatever its basis and nature, must be built around those aspirations if we are to engage students with FASD in learning and improve outcomes
for them, ensuring opportunities for success.

Teachers have found that being involved in this project has improved professional practice, been a positive experience for the school and has produced some practical benefits for inclusion for students with FASD and some of their peers. The researcher has found that her personal professional development has benefitted from visiting a range of school settings supporting students with FASD and drawing on the experience of the staff working directly with students, suggesting that the teacher-researcher model is effective for both parties.

The frameworks developed from the project have been useful for teachers in their inclusive practice and teachers have found them on the whole easy to use and effective. There are suggestions for improvement in some areas, which will be incorporated where practical and achievable to do so.

This project has set the scene for raising awareness amongst the teaching profession about the educational implications of FASD.

“The exploratory work that has been done through this project and the case studies that have been formulated will at least now give us a good grounding on which to build, evolve and grow future practice.” (Carpenter 2010)

It is important that it is seen as a beginning, rather than the end of an initiative though. More research is required into this area of SEN, and further investment in how professionals, educational policy and educational reform can support students with FASD:

“Maybe we do not currently have all of the range of provision that children with FASD are going to need, maybe we do not have all of the advisory support services in our teaching profession that are going to effectively support these children .... There’s a lot of learning to be done, we just need to be open to that amount of learning and, as a consequence of that, there will be system reform, system development, all of which will lead to better schools and greater engagement of children with Foetal Alcohol Spectrum Disorders.” (Carpenter, 2010)
**Recommendations**

The Project recommends that the following areas of development are considered:

**Education/Children’s Services**

1. The education workforce, together with the range of health and social care professionals who support it, need advice and information about what FASD is, an understanding of the complexity of needs and compounding factors, how it affects learning and how to support students responsively and flexibly in the classroom. This includes listening and responding to parents/carers as well as students’ views. This would be supported by the findings of the Lamb Inquiry 2009 (Chapter1) and the Salt Review 2010 (p.26).

2. More detailed consideration needs to be given to the curriculum for students with FASD, particularly teaching approaches which recognise the need for specific interventions which match the unique learning profile (e.g. memory, organisational skills) of these children.

3. In planning curriculum programmes, teachers should be mindful that the emphasis on cognitive ability is distracting, as this is not necessarily an indicator of how able the student is in coping with a particular approach/task/educational setting or package of services.

4. A more robust process of assessment of needs for students with FASD needs to be put in place, which is better suited to the particular range of difficulties experienced by students with FASD, and more sensitive to the vulnerability they face as they move through the education system and into adult life.

5. Thought needs to be given to the lifelong implications of FASD, and in particular reflection on an individual’s social and emotional functioning and ability to acquire life skills would be helpful.

**Workforce Development**

1. The outcomes of this project need to be widely disseminated and proactively advertised in order for as wide an audience as possible to receive information about the availability of the information.

2. Inclusion of material on supporting students with FASD should be considered for modules
delivered at Universities on Profound and Multiple Learning Difficulties (PMLD), Severe Learning Difficulties (SLD), Moderate Learning Difficulties (MLD), Complex Learning Difficulties and Disabilities (CLDD), Behavioural, Emotional and Social Difficulties (BESD), Autistic Spectrum Disorder (ASD), Attention Deficit and Hyperactivity Disorder (ADHD), and Sensory Impairment (SI).

3. Attention should be given to methods of assessment for service support packages and educational provision available to students with FASD and their families. There needs to be quality information in educational provision available to families about the holistic support package available including therapies which may support students’ individual needs.

4. Greater awareness of FASD amongst Educational Psychologists, Clinical Psychologists and others responsible for statutory assessment is necessary.

5. Trainee and practising teachers and the professionals who support them in meeting the complex needs of students with FASD need to be aware of the physical disabilities, health and medical aspects and learning difficulties faced by students with FASD and the implications for inclusive practice. They also need to know the similarities to and differences from other, apparently similar, conditions.

6. It is necessary for a range of professionals to be involved in the support package offered to students with FASD and their families. Teachers will need to be aware, therefore, of the range of professionals who may be involved and understand the role they play in strategies and interventions designed to support students, so that they may signpost parents to appropriate services and effectively implement such strategies and interventions in the classroom.

7. More information about FASD is needed in the education, health and social care services and society generally so that individuals affected and their families can be fully included in all aspects of life with proper understanding about the complexity of the condition, which is significant.
Health

1. There needs to be development of Therapy Services (e.g. speech and language, occupational therapy) that are aware of the needs of students with FASD. The complex sensory profile of the student with FASD calls particularly for the skilled input of an Occupational Therapist and sensory integration programmes.

2. Students with FASD are prone to mental health problems. Mental health and emotional well-being should be assessed regularly in order to provide early detection of signs and symptoms so that students can receive appropriate support delivered in a timely manner through school and/or CAHMS.

3. As a public health risk, more information needs to be available within society generally about the implications of drinking whilst pregnant. In particular a focus within school PSHE programmes would be valuable.

Families

1. Advice and support for parents/carers about the range of services available to them, and how they may be accessed through Aiming High for Disabled Children is necessary.

2. Many children with FASD are fostered or adopted. Respite care and short breaks should be offered to parents, to enable them to cope with the challenges of living with their child (or children) within the context of their family.

3. Information about FASD needs to be available to the range of professionals who might assess and support students with FASD and their families.

4. The provision of supported/sheltered living accommodation, possibly with work and leisure opportunities on site, where individuals may have a degree of independence at the same time as being able to access assistance with daily living skills is required to ensure success for individuals with FASD throughout adult life.
Research

1. Further educational research should be undertaken to investigate specifically and in more detail the levels of, and routes to, engagement (in particular of secondary aged students) with FASD in mainstream education. Specific interventions to improve levels of engagement, working memory, organisation skills, peer relationships and emotional development need to be investigated.
References


Specialist Schools and Academies Trust’s Complex Learning Difficulties and Disabilities Project [onlineat: https://www.ssatrust.org.uk/pedagogy/networks/specialschools/CLDD/Pages/default.aspx].

Youth in Mind Strengths and Difficulties Questionnaire (SDQ) [Online: http://www.sdqinfo.com/ accessed 30.06.2010].

APPENDIX A: SUMMARY OF PROJECT PROPOSAL

Key Words: Special Educational Needs; Education; Foetal Alcohol Syndrome; Foetal Alcohol Spectrum Disorders, Teaching and Learning Strategies

Key Research Staff

- **Professor Barry Carpenter, OBE, Ph.D., FRSA**, Project Director, Complex Learning Difficulties and Disabilities Project, Specialist Schools and Academies Trust (Project Director)
- **Carolyn Blackburn**, Project Officer/Project Researcher, FAS-eD Project, Project Advisor, Complex Learning Difficulties and Disabilities Project
- **Jo Egerton**, Project Research Officer, Complex Learning Difficulties and Disabilities Project, Special Schools and Academies Trust (Research Associate)

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Aims and Rationale

FASD operates as an umbrella term for a set of disorders caused by prenatal exposure to alcohol. This research project aims:

- To raise awareness amongst policy-makers, the teaching profession and wider education workforce (e.g. teaching assistants) of FASD and the learning needs of children affected.
- To work with students with FASD, an ITT provider, qualified teachers and ITT students and an FASD-specialist health practitioner to develop information and strategies to enable educators to support children with FASD to reach their potential as learners
- To develop CPD guidance and resources to support educators to construct personalised learning pathways for students with FASD that are relevant and pertinent to their learning profile
- To raise an appreciation in teachers of the need for close partnership with families as co-educators of children with FASD and to ameliorate secondary disabilities
• To disseminate widely the key outcomes of this project to key audiences concerned with the education, care and development of children and young people with FASD.

Methodology

This research will adopt an action research approach within nine case study schools over the period of 18 months. Following an in-depth review of literature which will focus upon the link between neuroscience and the educational impact of FASD on children’s learning in order to discover the teaching approaches which have been found to ameliorate the associated learning difficulties, the researcher will work with a purposive sample of 9 students with FASD and their educators in both mainstream and special school settings.

Baselining will be used to discover educators’ current knowledge of FASD and how children with FASD are currently supported in the schools. Following this, primary and secondary frameworks for supporting students with FASD will be developed and trialled to create a best practice model for practitioners working with these young people.

Outcomes

• To publish a review of literature on FASD, neuroscience and educational practice in relation to the UK educational context
• In collaboration with students with FASD and their parents, an ITT provider, qualified teachers and ITT students and an FASD-specialist health practitioner to trial and create downloadable CPD resources for schools (i) an FASD Awareness and Guidance Pack for Teachers and (ii) FASD Primary and Secondary Education Frameworks for Schools
• To include within the FASD Awareness and Guidance Pack, advice on working with parents of children with FASD, and information on the impact of secondary disability (e.g. mental health) on the effectiveness of children with FASD as learners
• To produce a Research Report with recommendations for policy and practice.
• To disseminate publicity for the Pack and Frameworks electronically among ITT providers and schools (innovative teaching across schools)
• To carry out speaking engagements related to the project through NOFAS-UK
## Timetable

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### Benefit Realisation

The outcomes of the project will be evidenced and evaluated by pre- and post-research surveys of practitioners involved in the project, by liaison with the University of Worcester Institute of Education project focus group, and by the Research Steering Group. Benefits and outcomes will include:

- Increased awareness of FASD amongst trainee teachers through the Project Focus Group and presentations by the researcher at Higher Education Establishments (e.g. Chester University).

- Increased understanding amongst the project partner schools about the complexities and multi-faceted aspects of living with Foetal Alcohol Spectrum Disorders, including the promotion of families as co-educators, how students affected learn and a range of successful teaching and learning strategies.

- Primary and Secondary teaching and learning frameworks validated by an action research
cycle with teaching and support staff in 9 schools.

- Dissemination through a range of suitable presentation opportunities including Early Years Networks in Staffordshire and Lancashire, Specialist Schools and Academies Trust events and the Royal Society of Medicine conference on the Current Approaches to the Education and Care of Children and Young People affected by FASD.
- Training courses will be delivered associated with the research, and the project outcomes will be further disseminated through: articles in academic and professional literature: podcasts and information posted on the NOFAS-UK website, E-mailshots, etc.

The project will be undertaken over an 18 month period from May 2009 to October 2010 and is designed to support the development of the SEN knowledge base in ITT and to build research capacity and to encourage collaboration in research in teacher education. The project will value parents as co-educators of their children.

The project will be guided by a Project Steering Group whose membership will comprise:

Mrs Carolyn Blackburn, Project Researcher
Professor Barry Carpenter, OBE, Associate Director (SEN), Specialist Schools and Academies Trust, Director, Complex Learning Difficulties and Disabilities Project, Project Director
Professor Hilary Constable, Educational Consultant
Ms Jo Egerton, Project Research Officer, Complex Learning Difficulties and Disabilities Project, Specialist Schools and Academies Trust, Research Associate
Ms Susan Fleisher, Executive Director, NOFAS-UK and parent of a young woman with FAS
Dr Raja Mukherjee, Consultant Psychiatrist, Surrey and Borders Partnership NHS Foundation Trust
The term ‘child’ is used to mean child/young person.

CHILD 1

Background

Child 1 is 6 years old and attends a state funded, coeducational special school for children between the ages of 3 and 11 years. The school caters exclusively for children who have special educational needs (SEN), including Severe Learning Difficulty (SLD) Profound and Multiple Learning difficulties (PMLD) Autistic Spectrum Disorder (ASD) and Multiple Sensory Impairment (MSI).

This child is currently working in a Year 1 class of 8 children with 4 adults consistently present in the class. She is currently working at P4/P5 levels, although she’s approaching P6 for some subjects (she works at different levels for different subjects, e.g. her numeracy skills are stronger than her literacy skills). She is, however, making steady progress within the P Levels. A total communication approach including Sign-a-long and visual timetables are used in the classroom for all children and throughout the school. In this school, the researcher liaised with the class teacher.

Engagement

Engagement observations show that this child was engaged in learning for the total amount of time observed. This included group work, individual work and free choice where the choice included a range of creative activities around a theme. An adult supported her throughout all three activities.

Diagram to Show Total Level of Engagement in Learning for Child 1

In terms of emotional engagement with school, this student expressed enthusiasm for school and talked about the number of friends she has at school, as well all the adults who support her within the school environment.
Strengths and Difficulties Questionnaire (SDQ)

<table>
<thead>
<tr>
<th>AREA OF DIFFICULTY</th>
<th>Conduct Problems</th>
<th>Hyperactivity</th>
<th>Emotional Symptoms</th>
<th>Peer Problems</th>
<th>Pro-Social Behaviour</th>
<th>Total Difficulties</th>
</tr>
</thead>
<tbody>
<tr>
<td>Teacher Perspective</td>
<td>Low Needs</td>
<td>Low Needs</td>
<td>Some Needs</td>
<td>Some Needs</td>
<td>Some Needs</td>
<td>High Needs</td>
</tr>
</tbody>
</table>

Table to show Strengths and Difficulties from Parent and Teacher Perspective for Child 1

As can be seen from the table above, this child presents a higher level of need in most areas at home than she does at school, although for some of the hyperactivity and peer associated issues, her teacher stressed that she copes with those areas well as a result of high level adult support. Much of her emotional and conduct related behaviour at home occurs at the end of a school day, when she is tired. Both parent and teacher perspectives show a high need overall. Parents said that their child has severe difficulties overall in the areas of emotions, concentration, behaviour or being able to get on with people. This upsets her only a little, impacts on friendships quite a lot, but does not impact classroom learning whilst she is in her present school. The teacher said that the child’s difficulties in this area are minor and upset or distress her only a little, but impact on friendships a great deal and classroom learning only a little.

Parents said that her strengths in the area of learning are working at her own pace, working at a developmentally appropriate level and accessing a play based curriculum, working in 1:1 situations and smaller class sizes and enjoying learning when these things are in place. The teacher said that her strengths are in the areas music and literacy, particularly reading where she is achieving success with the use of symbols/pictures.

In interview the teacher stated that the child needed help to seek out peers instead of adults and to seek out a variety of adults for help rather than just one in particular. She also needs help with sharing. Parents report that she needs help with understanding the point of view of others and being more tolerant and less demanding of her siblings. Parents also said that she demonstrates lack of understanding of boundaries, lack of concentration, lack of appropriate social skills and understanding of time and cause and effect and unusual levels of immaturity.

This child did not provide a response when asked about future aspirations.
Effective Teaching and Learning Strategies for Child 1 (feedback from Class Teacher)

<table>
<thead>
<tr>
<th>Strategy Trialed (Description)</th>
<th>Objective/Target for Strategy (What barrier to learning is the strategy intended to overcome)</th>
<th>Outcome (Successful/unsuccessful - why?)</th>
<th>Observable benefit to child (For example more engaged in learning, happier in class, reduced disruptive or inattentive behaviour)</th>
</tr>
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<tbody>
<tr>
<td>Money/Time</td>
<td>Plan role play sessions involving time and money with shop, restaurant and shopping scenarios. Use real objects so that students do not have to generalise.</td>
<td>Abstract concepts (including maths): level of understanding.</td>
<td>Successful. During number songs the child enjoyed 5 currant buns in a bakers shop using really currant buns. The child was able to take on the role of the baker and the customer. The child understood the concept and has used this knowledge when out in the community.</td>
</tr>
<tr>
<td>Play games and activities involving left and right instructions.</td>
<td>Abstract concepts (including maths): level of understanding.</td>
<td>We use this activity during our hello session when the child puts her picture on the wall. It has been very successful and the child can now follow two instructions i.e. right one and down one.</td>
<td>The child has gained in confidence and can direct an adult as to which way to turn. This has also been extended to using the Bee Bot.</td>
</tr>
<tr>
<td>Use appropriate reward systems which reward the student for their individual achievement, and which motivate them personally.</td>
<td>Inappropriate classroom behaviour.</td>
<td>Successful. This has worked very well and it gives the child the motivation to demonstrate appropriate behaviour by receiving a star for good work etc during our end of day assembly.</td>
<td>The child has taken to the reward system and often wants to please to receive the reward. The child has also gained in confidence as she is being praised for appropriate behaviour and there is less focus on the negative behaviour. The child demonstrates excellent behaviour whilst in school.</td>
</tr>
<tr>
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<tr>
<td>Use an animated voice, facial expressions and exaggerated gestures will engage students who are developmentally younger and aid memory retention.</td>
<td>Memory difficulties/lack of organization skills/not following rules.</td>
<td>Successful because the child is more motivated to take part which results in a hands on approach, which aids memory.</td>
<td>The child benefits from the use of expressions and gestures. It encourages her to take part and she then uses her expressions etc in her own speech and conversations.</td>
</tr>
<tr>
<td>Provide plenty of positive feedback and be positive about student’s efforts. Ensure praise is immediate and given in a consistent way.</td>
<td>Egocentric behavior. Overly competitive. Poor self esteem.</td>
<td>Very successful. The child has gained in confidence since having consistent praise.</td>
<td>The child has gained in confidence and through positive praise and boundaries she has gained in confidence and is aware of her boundaries. The child responds to praise and thrives to please.</td>
</tr>
<tr>
<td>Ensure parents/careers have advance notice so that they may prepare students adequately.</td>
<td>Becoming overwhelmed during special events such as non uniform day.</td>
<td>Successful. This has taken place through our home/school diary. It has helped the child when attending another school for swimming. Both the family and staff in the child’s class have used stories etc to discuss the activity and the things to look forward to.</td>
<td>The child was less anxious when attending the school for our swimming sessions. The child really enjoys her swimming sessions and has enjoyed going.</td>
</tr>
<tr>
<td><strong>Strategy TRIaled</strong>&lt;br&gt; (Description)</td>
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<tr>
<td>Provide a safe environment and ensure adequate adult support.</td>
<td>Difficulty in understanding of personal/social dangers/danger of actions to self and other students.</td>
<td>This has been successful as the environment is crucial to the child’s learning. The child feels safe and secure in the environment. Adult support varies depending on activities.</td>
<td>Child appears happy to be in school and take part in any activity.</td>
</tr>
<tr>
<td>Ensure effective communication with parents and cascade information from parents to all staff.</td>
<td>Difficulty in understanding of personal/social dangers/danger of actions to self and other students.</td>
<td>This is very successful. We have a home/school diary which links us with the parents and any other agencies that may be attached to a child i.e. respite. We use the book to tell parents what their child has been doing and any other important information. It also allows parents to inform the class team of any important information etc. this information is mainly kept within the class team unless it needs to be discussed with other members of staff.</td>
<td>It has helped the child by being able to prompt her during News sessions. It has also helped to discuss behaviour that occurs at home.</td>
</tr>
<tr>
<td>Encourage the enjoyment of books at a level that is developmentally appropriate to the student, i.e. picture books without too much text may be more appealing to a developmentally young child, even if it may not seem age appropriate.</td>
<td>Communication skills: Literacy Skills</td>
<td>Successful. The child enjoys story sessions. The child likes to listen to stories and take part in acting out the story. The child enjoys weekly group reading sessions and enjoys re telling the story in her own words.</td>
<td>It has helped the child as the she does not feel overwhelmed. The child is engaged and can’t wait for her turn to retell a story.</td>
</tr>
<tr>
<td><strong>Strategy Trialed</strong> (Description)</td>
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<tr>
<td>Keep tasks short and achievable and break tasks up with physical activity to expend energy and refocus attention.</td>
<td>Inattention/Distractibility/ Hyperactivity</td>
<td>Having short sharp sessions is very successful with this child and is something that we do day to day. We use a range of activities which involve using a range of senses and allowing the child to be hands on.</td>
<td>This has benefited the child as the child is able to stay focused for lengthy periods. The child will complete activities independently and remain focused.</td>
</tr>
<tr>
<td>Expect to repeat instructions and rules frequently. Ensure that the consequences of not following rules are consistently applied.</td>
<td>Memory difficulties/lack of organisation skills/not following rules.</td>
<td>This is very important and a consistent for any child to have a clear understanding of boundaries. This has been successful. Repeating what expected of the child through a positive way and not focusing on negative such as you won’t do is very important.</td>
<td>A consistent approach has been very beneficial to the child as the child knows their boundaries and what we expect of them. The child has learnt to admit to things that happen instead of saying I don’t know or saying it was someone else.</td>
</tr>
<tr>
<td>Provide opportunities for the child to take on special roles within school where appropriate, such as Prefect or ‘Special Helper’. Give the child small tasks to perform throughout the day such as taking the register to reception.</td>
<td>Immaturity and lack of social understanding about employment opportunities and job roles.</td>
<td>Allowing the child to take on jobs within the class has been very successful as the child has gained in confidence and self esteem.</td>
<td>The child has gained in confidence and is happy to interact with people around school other than the people in the child’s class with confidence.</td>
</tr>
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<tr>
<td>Encourage the child to participate in fundraising for specific school goals, for example participating in the Christmas fair to raise money for a school trip.</td>
<td>High levels of funding are required to provide appropriate provision and support to meet students’ needs.</td>
<td>This was successful as the class made items to sell. The money raised would be shared between each class and then we would use it as a treat for the children at the end of term.</td>
<td>The child grew in confidence and was calling on the people to come and buy the items made by the child and the child’s class. The child worked well as a team with support.</td>
</tr>
<tr>
<td>Use puppets, role play and drama to explore feelings and attitudes.</td>
<td>Difficulty in forming and maintaining relationships with peers and staff.</td>
<td>This has been quite successful. We have been working on identifying feelings/emotions in picture cards.</td>
<td>The child has shown a clear understanding of emotions in the third person and is beginning to identify why. Using the third person has allowed the child to express without being about themselves.</td>
</tr>
<tr>
<td>Consider asking an occupational therapist to undertake a sensory profile if the student seems switched off frequently or easily overwhelmed by texture, noise, light, smell, movement, sound, temperature, crowded places or too much dialogue as they may be hypo sensitive or hyper sensitive.</td>
<td>Sensory Processing Difficulties.</td>
<td>We are currently in the process of completing a profile.</td>
<td></td>
</tr>
</tbody>
</table>
CHILD 2

Background

Child 2 is 7 years old and attends a Mainstream Primary School. At the beginning of the school based phase of the project (September) he was placed in a mixed year 2/3 class in the mornings to work on numeracy and literacy. During these sessions, he worked with a Teaching Assistant, whilst the teacher worked with other children on the carpet, then he was rewarded with computer time or games so that the Teaching Assistant could help other children. In the afternoons, he spent time in Year 1 class in order to access a play based curriculum, where he had 1:1 support. His teacher thought that he found this transition difficult and staff had been taking photographs and making booklets to help him with the transition from class to class. There are 27 children in this class, although 9 go up to another class for maths (first session of the morning). In the afternoon there are 22 children, with 2 adults (one of which is to support child 2).

In January, this was changed so that he spent the mornings in year 1 and the afternoons in the year 2/3 class. From April it was decided that he would spend the whole day in year 1 with support from a TA so that he could access a more developmentally appropriate curriculum. In year 1 there are 22 children and 2 adults including one to support the student in question.

This student is working at P6/7 and the teacher reports that he can do little independently. His teacher and the School SENCo concur that he is operating at the level of a 4 year old intellectually as well as socially and emotionally. They feel he is struggling to cope with the environment and has difficulty in following any rules. As far as literacy is concerned, he does not have phonic knowledge in place. An assessment from the Learning Support Team suggests that he is not ready for ‘a formal learning environment’ and recommends that he access a play-based environment in order to develop gross motor skills, language and social skills. This student is placed on a 6 month review cycle.

In this school, the researcher liaised with a temporary class 2 teacher, who was covering a maternity post and completing her NQT year, followed by the permanent class 2 teacher upon her return from maternity leave (she is also the school SENCo) and finally the year 1 class teacher. This student is prescribed medication for hyperactivity.

Engagement

Baseline observations show that this child was engaged for 50% of the time observed. The range for his level of engagement is 40% for carpet time activities to 76% for individual work when he was supported by the teacher. An Interactive Whiteboard was used during carpet time. He was observed during a maths lesson, where the adult to child ratio was 1:9, for carpet time and individual work. Activities he was involved in whilst not engaged included:

- Wandering around the room or running around the room
- Talking to the Researcher
- Looking at displays
- Playing with a chair
- Playing with books in the book corner
- Emptying his drawer and other children’s drawers
- Leaving the room
- Playing with the computer
Diagram to Show Total Level of Engagement in Learning for Child 2

In terms of emotional engagement, it was not possible to hold a discussion with this student as he was distractible and did not answer any of the researcher’s questions directly.

Strengths and Difficulties Questionnaire (SDQ)

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<thead>
<tr>
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<tr>
<td>Teacher Perspective</td>
<td>High Needs</td>
<td>High Needs</td>
<td>Low Needs</td>
<td>High Needs</td>
<td>High Needs</td>
<td>High Needs</td>
</tr>
</tbody>
</table>

Table to show Strengths and Difficulties from Parent and Teacher Perspective for Child 2

Parent and teacher perspectives for this child are the same in every area with the exception of emotional difficulties. Parents state that their child has serious difficulties overall in the areas of emotions, concentration, behaviour and being able to get on with people, which upset him only a little but which impact on friendships and classroom learning quite a lot. The teacher reports that overall this child has serious to severe difficulties which upset him quite a lot and impact on friendships and classroom learning a great deal. His assessment for statement (which includes significant speech and language delay, significant learning difficulties, hyperactivity and inattention as well as FASD) confirms his high needs in the area of hyperactivity and emotional and social development.

The teacher said that an area of strength for this student is maths and succeeding when a positive tone of voice and appropriate praise is used, whilst parents find that his ICT and gross motor skills are strong. His challenges as a learner from parents’ point of view are frustration when he’s trying to write, which he finds hard, and lack of sense of danger. The teacher also said that the student’s high level of distractibility, particularly in noisy environments involving frequent change is difficult. His lack of attention span and focus, coupled with obsessions about people and objects and lack of sharing and turn taking skills are challenges in the classroom. He plays alongside rather than with other children and does not generally understand the rules.
of their games. He doesn’t talk about his play out loud as his peers do and he continues (perseverates) with the same conversation long after the other children have moved onto another topic. The previous and current teacher and SENCo feel that other children tolerate him, but do not actively seek him out.

In interview parents stated that the child has few friends at home because he has to be closely supervised whilst playing with friends as he is easily led, but they feel he has friends at school. They hope that with enough support now, he will ‘catch up’ in the future.

Information from Statutory Assessment

Strengths Include:

- Interested in peers
- Speaks politely to unfamiliar adults
- Able to sit amongst peers on the carpet
- Able to give and receive peer massage
- Able to share when in a relaxed frame of mind
- Lets peers know if another child is interfering with their possessions
- Uses appropriate eye contact
- Understands simple instructions
- Uses functional communication
- Able to transfer around school into difference classrooms

Areas of Difficulty Include:

- Ability to treat peers appropriately
- Positive social interaction
- Receptive and expressive skills in general
- Conforming to the set agenda when this does not agree with his own
- Actively refusing to do as he is asked
- Emotional resilience
- Difficulty in distinguishing between fantasy and reality

This child did not provide a response when asked about future aspirations.
<table>
<thead>
<tr>
<th><strong>Strategy Trialed</strong> (Description)</th>
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<th><strong>Observable benefit to child</strong> (For example more engaged in learning, happier in class, reduced disruptive or inattentive behaviour)</th>
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</thead>
<tbody>
<tr>
<td>New vocabulary is introduced before hand, such as push/pull in our science topic: Forces and Movement.</td>
<td>Unsure of new vocabulary used in lessons.</td>
<td>Successful when doing scientific experiments and what vocabulary meant.</td>
<td>The child is more engaged in learning.</td>
</tr>
<tr>
<td>Environment where distractions limited.</td>
<td>The child is taken to area where there is no noise and where he can focus better.</td>
<td>Successful as not distracted by others and has more focus in carrying out tasks.</td>
<td>The child is happier and more engaged in learning activities.</td>
</tr>
<tr>
<td>Frequent breaks to refocus. Breaks through lessons.</td>
<td>The child is taken to a calm environment to refocus. Reward time that the child is interested in is then provided.</td>
<td>Successful as the child can carry out sort tasks with reward of physical activity at the end before next activity.</td>
<td>The child is happier that he can achieve as task are short and achievable.</td>
</tr>
<tr>
<td>Small group work and 1:1 work.</td>
<td>To overcome anxiety and uncertainty of how to carry out activities.</td>
<td>Successful as completing tasks with reassurance.</td>
<td>The child is happier with carrying out activities.</td>
</tr>
<tr>
<td>The child is to repeat instruction given to him to ensure understanding.</td>
<td>The child is unsure of what to do, what is being asked of him.</td>
<td>Limited instructions and short choice vocabulary used has meant that the child has been able to repeat instruction verbally and can then carry out task.</td>
<td>The child is less frustrated when told to carry out a task. More reassurance of what is expected.</td>
</tr>
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</tr>
<tr>
<td>Ensure parents have advance notice of events so that they may prepare students adequately.</td>
<td>Avoid over-excitement when arriving at school. To limit constant questioning leading up to an event. To ensure sensible behavior choices.</td>
<td>Successful – more so for the trips than the silly hat day! Everyone very excited, the child included. The hat took over his day – it was a very hot Friday so that did not help. For the trip we went on, the child showed much more positive behavior and more controlled choices and actions.</td>
<td>The child enjoyed the trip and asked a lot of sensible questions. Other children in the class/group interacted with the child in a more positive and lengthy manner, as he was making the right choice and was not lead by an adult all the time.</td>
</tr>
<tr>
<td>Trip to the Garden Centre</td>
<td></td>
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<td></td>
</tr>
<tr>
<td>Silly Hat Day</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Trip to the Farm Shop</td>
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<tr>
<td>Quiet Time Area in the classroom – provide a quiet time area where the student can go to calm down.</td>
<td>Child becoming distressed /anxious about incidents in the classroom. Avoid arguments over resources / friendship groups.</td>
<td>Successful – the child has shown a liking for the reading corner in our classroom. This is a small area with soft camping style chairs, large cushions and a selection of story books. It is a sheltered area, tucked away at the back of the room. The child often sits here during carpet time but shows active listening by looking carefully at the speaker. He enjoys having his own ‘space’.</td>
<td>The child knows this is a safe place where he can go to have some time out. Other children don’t use this space during activities and guided tasks so the child knows he can use it if he is upset or frustrated. We sometimes use this space to talk things through and calm the child down.</td>
</tr>
</tbody>
</table>
| **Strategy Trialed**  
(Description) | **Objective/Target for Strategy**  
(What barrier to learning is the strategy intended to overcome) | **Outcome**  
(SUCCESSFUL/UNSUCCESSFUL - WHY?) | **Observable benefit to child**  
(For example more engaged in learning, happier in class, reduced disruptive or inattentive behaviour) |
|---|---|---|---|
| Use of visual aids and timetables to break things into chunks.  
Level of Understanding | Ensure the child has clear overview of what is happening.  
To focus attention on one activity/task at a time. | Successful - using the visual timetable has proved invaluable for the child. He enjoys going through it at the beginning of the day with the class, and we talk each part of the day through. It helps him to calm down if we have a visitor or are going on a trip as he knows what is happening before the event. | The child often asks what we are doing today and what is happening next, etc. We use the timetable with the whole class to discuss and go through the plan for the day. The child then breaks this down further by bringing his task Now/Next board to find out what he needs to do in small chunks. |
CHILD 3

Background

Child 3 is 8 years old and attends a Mainstream Primary School where she is placed in a Specialist Resource Centre for children of primary age with moderate learning difficulties. She is working within a Year 3 group at National Curriculum level 1. She accesses mainstream education within the school for Physical Education with another child from the unit, accompanied by a member of staff from the unit. There are approximately 13 children in the unit who are aged 7 to 11 years and have a range of needs, although the size of the class can vary as children access mainstream classes in other parts of the school according to their needs. None of the children in the unit have 1:1 support but there is an adult to child ratio of 2:1. In this school the researcher liaised with the 2 teachers working in the Specialist Resource Centre.

Engagement

Baseline engagement shows that this child was engaged for 97% of the time. The range for her level of engagement was 100% for carpet time and individual work to 80% for unguided individual reading. The child was observed during a maths lesson where the focus was on shapes, which was taught using 3D plastic shapes to reinforce what the teacher was saying. This was extended through individual work focused on making simple patterns with shapes supported on a 1:1 basis by the class teacher.

Diagram to Show Level of Engagement in Learning for Child 3

In terms of emotional engagement with school, this child expressed enthusiasm for school and talked about the staff who help her when she gets stuck and her confidence in writing and drawing.
### Table to Show Strengths and Difficulties for Child 3

The only area of agreement between parents and teachers with this child is pro-social behaviour where both agree that she has low needs. Overall the teaching staff felt that the child has more serious difficulties in the areas of emotions, concentration, behaviour and being able to get on with people which upset or distress her quite a lot and impact on friendships quite a lot, but classroom learning only a little, whilst parents feel that she has severe difficulties in these areas, which upset or distress her a great deal and impact on friendships a great deal and classroom learning quite a lot.

Parents said that the child’s successes as a learner are in the areas of reading and writing in which she has made significant progress since starting her new school in September and which she seems to enjoy. Teachers said that her strengths are in the areas of listening, contributing in class, role play and independence.

Her biggest challenge as a learner from parents point of view are lack of concentration where 1:1 support is not provided and frustration if she can’t manage a task or grasp a concept, whilst teachers said that she has to be slowed down as she tends to rush into things and she finds it difficult to grasp abstract concepts or tasks where more than one step is required.

Socially, parents say she just doesn’t know how to have a conversation; she doesn’t know how to ask appropriate questions and wait for the response. This means that she will ask a question and then ask it again and again and again. This is either because she has not understood the answer or the answer is not the one she wanted or the way she wanted it or the question she had in her mind may not have come out the way she thought it would.

This child’s current aspirations are to be a Mummy (though she was unsure about having children of her own).
### Effective Teaching and Learning Strategies for Child 3 (feedback from Specialist Resource Centre Teachers)

<table>
<thead>
<tr>
<th>Strategy TRIALED (Description)</th>
<th>Objective/Target for Strategy (What barrier to learning is the strategy intended to overcome)</th>
<th>Outcome (Successful/unsuccessful - why?)</th>
<th>Observable benefit to child (For example more engaged in learning, happier in class, reduced disruptive or inattentive behaviour)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Make visual timetable concrete by including photographs of the student doing activities rather than symbols or drawings (the photographs include all of the children from our class).</td>
<td>Communication skills: level of understanding</td>
<td>When the timetable was first introduced the children didn’t refer to it but we talk about it together now and I make sure it reflects the day accurately. However, now I have observed the children looking at it/checking it and using it effectively. I hope that the next step will be that they will ask questions about it.</td>
<td>The benefit has been that the children have become more independent.</td>
</tr>
<tr>
<td>Provide multi-sensory opportunities with natural gesture and consistency of language throughout the school/provide tactile examples.</td>
<td>Communication skills: level of understanding</td>
<td>We have introduced a sensory box and this has been successful.</td>
<td>The children use amazing language when the sensory box is out and it is also a resource for if they are feeling frustrated, confused etc.</td>
</tr>
<tr>
<td>Use positive language; tell the child what you would like them to do rather than what you would not like them to do.</td>
<td>Communication skills: level of understanding</td>
<td>We have adopted this across the whole school after a staff meeting and it has been very successful</td>
<td>The children understand the expectations more clearly now and they visibly respond to praise (big smiles and thumbs up etc).</td>
</tr>
<tr>
<td><strong>Strategy Trialed</strong> (Description)</td>
<td><strong>Objective/Target for Strategy</strong> (What barrier to learning is the strategy intended to overcome)</td>
<td><strong>Outcome</strong> (Successful/unsuccessful - why?)</td>
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</tr>
<tr>
<td>Provide laptop for written work.</td>
<td>Communication skills: literacy skills.</td>
<td>Very successful.</td>
<td>Very excited about the learning and enjoying exploring what the laptop can do.</td>
</tr>
<tr>
<td>Provide audiotapes or CDs of textbooks, literature and social stories.</td>
<td>Communication skills: literacy skills.</td>
<td>Unsuccessful – they find it hard to sit and listen when there are other things going on around them.</td>
<td></td>
</tr>
<tr>
<td>Use puppets, role play and drama to explore feelings and attitudes.</td>
<td>Difficulty in forming and maintaining relationships with peers and staff.</td>
<td>SUCCESSFUL! It has given the children their own little world and the chance to be imaginative and work together.</td>
<td>Improved peer relationships and conversation/language use. This has also fed into playtimes as their friendships are stronger and they have more ideas for games.</td>
</tr>
</tbody>
</table>
| **Strategy Trialed**  
(Description) | **Objective/Target for Strategy**  
(What barrier to learning is the strategy intended to overcome) | **Outcome**  
(Successful/unsuccessful - why?) | **Observable benefit to child**  
(For example more engaged in learning, happier in class, reduced disruptive or inattentive behaviour) |
|---|---|---|---|
| Ensure parents have advance notice of events so that they may prepare students adequately.  
(We sent home a detailed letter about 2 trips that were coming up this week; one was to a park and one was to another school) | Becoming overwhelmed during Special events such as Non Uniform day. | The child enjoyed the trips. They were places that we had been to before and we gave them lots of opportunities to ask questions about what was coming up. | The child was observed to enjoy the trips and got ‘stuck in’ on both occasions. Another benefit was increased social interaction with others (or exposure to). |
| To use ICT as a visual representation of number rules and maths concepts- computer based learning programmes | Abstract concepts in maths -To recognize, name and describe properties of 3D shapes. To recognize and create repeating patterns. | Successful- due to visual / auditory and repetitious presentation. Complementary to physically handling and talking about 3D shapes. | Engaged in learning. Development of concepts associated language and repeating patterns. |
| Provide multi-sensory opportunities with natural gesture and consistency of language throughout the school/provide tactile examples. | Communication skills: level of understanding. | We have introduced a sensory box and this has been successful. | At the moment the child is finding it really hard to explore the sensory box. She has tried to withdraw from the group and throw a ball to herself, but generally she enjoys it. |
| **Strategy Trialed**  
| (Description) | **Objective/Target for Strategy**  
| (What barrier to learning is the strategy intended to overcome) | **Outcome**  
| (Successful/unsuccessful - why?) | **Observable benefit to child**  
| (For example more engaged in learning, happier in class, reduced disruptive or inattentive behaviour) |
| To use ICT as a visual representation of number rules and mathematical concepts - computer based learning programs. | Abstract concepts in maths - To recognize, name and describe properties of 3D shapes. To recognize and create repeating patterns. | Successful - due to visual / auditory and repetitious presentation. Complementary to physically handling and talking about 3D shapes. | Engaged in learning. Development of concepts associated language and repeating patterns. |
| Provide 1:1 adult supervision 100% of the time. Ensure supervision is low impact and subtle | Inappropriate interactions with other children. | This has been very successful because there have been no incidents since. It has also become part of our culture because the other girls want to do the same! | She has seemed less stressed after break and lunch times and it has made her more independent. |
| **Strategy Trialed** | **Objective/Target for Strategy** | **Outcome** | **Observable benefit to child** |
|----------------------|----------------------------------|-------------|---------------------------------
| (Description)        | (What barrier to learning is the strategy intended to overcome) | Successful/unsuccessful - why? | (For example more engaged in learning, happier in class, reduced disruptive or inattentive behaviour) |
| Expect learning to take place at a slower pace, make teaching interactive and allow the student to talk through mathematical processes and problems as this may help with memory. The child has developed a script to help her manage the process of ‘counting on’: ”take the number out of my head (say it), now count on…” | Abstract concepts: level of understanding | This has been successful: The child has repeated this procedure repeatedly which has helped to embed the process. | More confident and more able to cope with task. |
| Provide concrete examples of abstract concepts. Use real objects for counting. Use concrete examples to demonstrate and establish what numbers stand for Relate numbers to meaningful concrete objects. The child found it difficult to understand the concept of a numerical difference. Through the use of concrete apparatus- teddy bears, cups, spoons, plates etc., The child was able to say whether there were enough/ not enough and how many more were needed. | Abstract concepts: level of understanding | Successful because the child has gained a better understanding of difference. Modeling that cubes could ‘stand for’ the concrete objects (bears etc.) went some way to developing a more abstract understanding. | More confidence, engagement and understanding. |
**CHILD 4**

**Background**

Child 4 is 10 years old and attends a Mainstream Nursery and Primary school. She is placed in a class of 30 children, where she is working on P levels (Reading P8, Writing P7 and Maths P8) and she has 1:1 support from an Inclusion Assistant for all activities. This is a job share position.

The Learning and Behaviour Support Service and Speech and Language Therapist are supporting her learning, providing classroom strategies and input to Individual Education Plans (IEPs). Much of the evidence for her learning is photographic rather than worksheet or text based, and her Inclusion Support Assistants will scribe for her when necessary. She has a cleft palate and squint. At play time and lunch time a buddy system is in operation so that Child 4 has a group of friends who will play with her and look after her well-being. She is also part of a Nurture Group\(^4\) in school which meets once a week to work on life skills related to SEAL and PHSE. During this time issues such as growing, cooking, safety, etc are highlighted. In this school, the researcher liaised with the class teacher and the inclusion support assistant.

**Engagement**

Baseline observations show that this child was engaged in learning for the total amount time observed. She was observed in literacy and numeracy activities either working in the classroom with her Inclusion Support Assistant, whilst the rest of the class were working on the carpet, or in the Library working individually with her Inclusion Assistant. All activities were personalised for her, developmentally differentiated and involved the use of concrete and kinaesthetic resources to support learning.

![Diagram to Show Total Level of Engagement in Learning for Child 4](image)

**Diagram to Show Total Level of Engagement in Learning for Child 4**

In terms of emotional engagement with school, this student expressed enthusiasm for school and talked about her affection for her inclusion support assistant.

\(^4\) Nurture groups are small classes in infant and primary schools for students with social, emotional, behavioural and learning difficulties. There are also nurture groups in secondary schools, but these are less common. A central aim of nurture groups is to provide students with a secure and safe environment that provides the conditions for them to develop emotionally, socially and cognitively (Boxall 2002).
Table to show Strengths and Difficulties from Parent and Teacher Perspective for Child 4

Parent and teacher perspectives are similar for child 4, and only differ in the areas of conduct and total difficulties, although the teacher was keen to point out that the child’s needs are addressed very well in school, which she feels reduces some of the emotional and peer problems that might otherwise be present. Parents said that their child has severe difficulties in the areas of emotions, concentration, behaviour and being able to get on with people which upset or distress her a great deal and impact on friendships only a little but classroom learning quite a lot. The class teacher said that the child has serious difficulties in these areas which upset or distress her quite a lot and impact on friendships only a little but classroom learning a great deal.

Parents said that their child’s enjoyment of P.E and positive attitude to learning is a success as is her improvement in reading which they feel is a result of visual teaching strategies and 1:1 support. This view is supported by staff within the school. Her challenges are difficulty with numbers and abstract concepts, lack of concentration and lack of independence from parents’ point of view, and teachers concur that keeping her on task is a challenge and requires 1:1 support.

Parents stated that although this child has friends, they tend to Mother her and do not play with her on an equal level. They also feel that the social and emotional gap between her and her peers is widening and that she is being left behind in this area. Teacher interview concurred with this view and school have introduced a ‘buddy’ system to assist with this. Distractibility is the biggest challenge in classroom learning.

This student’s current aspirations are to be a Footballer.
## Effective Teaching and Learning Strategies for Child 4 (feedback from Class Teacher)

<table>
<thead>
<tr>
<th>Strategy Trialed (Description)</th>
<th>Objective/Target for Strategy (What barrier to learning is the strategy intended to overcome)</th>
<th>Outcome (Successful/unsuccessful - why?)</th>
<th>Observable benefit to child (For example more engaged in learning, happier in class, reduced disruptive or inattentive behaviour)</th>
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<tbody>
<tr>
<td>Social experiences e.g. eating activities in life skills.</td>
<td>Social eating with a small group of children Skills: sharing, manners, learning how to use a knife (buttering).</td>
<td>Very successful. The child will participate within the group. Fine motor skills improving, social eating v. enjoyable and allowed lots of opportunities for chatting and increasing social awareness.</td>
<td>The child can use these skills at home, parties, restaurant etc. Life skills</td>
</tr>
<tr>
<td>“Self” through discussion (circle time activities).</td>
<td>Used daily within the class during discussions across the curriculum, Group read, reflection opportunities. Speaking and listening.</td>
<td>Very successful. The child knows when it is her time to talk and when it is her time to listen. The child will put her hand up independently and participate in lessons.</td>
<td>Happy and engaged in class. The child does not always need prompting within class discussion as she is independent in her responses. Excellent for independent learning and for assessment opportunities!</td>
</tr>
<tr>
<td>Majority of strategies on the being healthy section are naturally included within the school setting – i.e. Healthy eating within Science, school assemblies etc.</td>
<td>Cooking within life skills. Discussion on healthy eating. Trying new foods (fruits) in life skills.</td>
<td>The child really enjoys food and is therefore naturally interested and engaged in her learning and experience. The child enjoys cooking and this in turn gives ample speaking and listening/communication skills to be put into practice.</td>
<td>Good understanding of healthy food.</td>
</tr>
<tr>
<td><strong>Strategy Trialed</strong> (Description)</td>
<td><strong>Objective/Target for Strategy</strong> (What barrier to learning is the strategy intended to overcome)</td>
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</tr>
<tr>
<td>Address stranger danger and personal safety issues during circle time/drama.</td>
<td>Discussed during assembly time/PHSE and “people who help us” topic. (Life skills).</td>
<td>Successful. Hopefully the child understands who is able to approach if she is lost – fireman, police- person. Visits to school from police/fire have reinforced this.</td>
<td>Helps the child to understand her community and who to trust.</td>
</tr>
<tr>
<td>Strategy Trialed (Description)</td>
<td>Objective/Target for Strategy (What barrier to learning is the strategy intended to overcome)</td>
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<tr>
<td>Small group work Discussed with child (work experience) group work on Bullying.</td>
<td>Anti bullying reminder. The child is capable of telling us if she is unhappy at lunchtime. Similarly – the child can recognize nice playing and can identify what she wants to do with her time – she is becoming more independent which is stopping people from treating her like a baby.</td>
<td>Very successful. The child is largely independent at Lunch times and playtimes. An adult is there if the child needs their help but they monitor her needs from a distance. This aids her independence too.</td>
<td>The child is speaking a lot more for herself and is becoming more aware of what is right and wrong in a certain amount of situations.</td>
</tr>
<tr>
<td>Changes to timetable/schedule.</td>
<td>Widgit symbols on show below the whiteboard so the child (and the other children) have a visible timetable. Routines of the day are there for the child to see and discuss. Teacher/TA/friends will talk through the structure of the day.</td>
<td>Successful transition made when lessons/days have been altered.</td>
<td>Homelink diary to inform parents of any changes. Parents also use this as a communication aid to tell us of things we need to know.</td>
</tr>
<tr>
<td>Provide 1:1 adult support giving independence when appropriate.</td>
<td>Most areas of the curriculum support are given when needed to keep on task, especially. The child had a variety of independent choices to choose from.</td>
<td>Successful – the child is confident and happy, she is a child who is thriving with support and is becoming more confident without support.</td>
<td>To identify when the child needs time out and space due to overload, being tired or emotional</td>
</tr>
<tr>
<td>Strategy Trialed (Description)</td>
<td>Objective/Target for Strategy (What barrier to learning is the strategy intended to overcome)</td>
<td>Outcome (Successful/ unsuccessful - why?)</td>
<td>Observable benefit to child (For example more engaged in learning, happier in class, reduced disruptive or inattentive behaviour)</td>
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</tr>
<tr>
<td>Provide opportunities for group work.</td>
<td>Group reading. The child joins in with a weekly reading session with 5 other children. Books are suited to their needs and discussion follows after the session.</td>
<td>VERY successful, the child will take her turn and put her hand up to join in by answering questions and she is beginning to re-tell stories.</td>
<td>Inclusion. Good for the child but also good for others in the group for reinforcing ideas.</td>
</tr>
<tr>
<td>Make visual timetables’/using photographs</td>
<td>The child has a visual timetable in the front of the class. Written responses to lessons are not always needed. We use photo evidence of practical work showing the child playing games etc.</td>
<td>Successful, we will look back through the book and discuss previous work. Topic books are also made for various subjects. We have worked with jumbled sentences – the child has used this to work on sentence structure.</td>
<td>The child is engaged in her learning. It is also an excellent way of sharing the child’s work with others and for the child to show her parents what she has done at school</td>
</tr>
</tbody>
</table>
| **Strategy Trialed**  
| **(Description)** | **Objective/Target for Strategy**  
| (What barrier to learning is the strategy intended to overcome) | **Outcome**  
| (Successful/unsuccessful - why?) | **Observable benefit to child**  
| (For example more engaged in learning, happier in class, reduced disruptive or inattentive behaviour) |
| Maths  
Assesses the curriculum at the level and understanding. | Crickweb – Education Resource website with an Early years section used to encourage independence, mouse skills. Games resources – foundation stage. Fractions- cutting up fruit. | Successful: tactile, visual areas of learning. | Keeps the child engaged whilst learning. |
| Literacy | Variety of resources provided by the Learning and Behaviour Support Service, involving blends, phonics, reading books. Small group work to suit child’s needs. | Successful: Reading improved, can retain some information from class discussion. | Lots for the child to be involved and lots of opportunities for praise. |
| History  
Geography | Topic books made with photos for school and home reading. | Very successful: Inclusion learning within the classroom and not outside. Also encourages independent reading and knowledge on the related subject. | The child is more included within the classroom and more independent. |
CHILD 5

Background

Child 5 is 11 years old and attends a Specialist Physical and Sensory Special School. The school caters for pupils aged from 4 – 16 for physical disabilities and complex medical needs and children aged 11 – 19 with Profound and Multiple Learning Difficulties (PMLD). His needs are mostly medical, which include impaired sight and ongoing problems with his eyes, heart problems (a leak on one of the valves), feeding problems, skeletal problem where (his bones are not formed properly), he cannot walk or balance well, he runs but only in certain situations but he is not safe if it is crowded. He does not manage stairs very well, mobility is an issue and he is doubly incontinent.

He is placed in a class size of 10 children. There are 4 adults in the class, one of whom is there to support one child in particular. He follows a modified National Curriculum and he is working at Year 2/3 level according to the subject area. At the moment, he is with age appropriate peers, but when he makes the transition from primary to the secondary part of the school in September, he will be streamed according to ability (social and emotional as well as academic) so he will be with a mixed age group. In this school the researcher liaised with the class teacher who is also Head of Primary.

Engagement

Baseline observations show that this child was engaged for 88% of the time. The range for his levels of engagement is 100% for group work to 70% for individual work. For group work he was sat on a chair in a semi-circle directly in front of the teacher, who used an Interactive Whiteboard, animated and exaggerated facial expression and gestures, together with a visual timetable and sing-a-long to interact with all the children. For individual work, he sat at a table with 4 other children and the teacher was available for all children. Activities that he was involved in whilst not engaged include:

- Being distracted by the child next to him
- Playing with blocks, waiting for the teacher whilst she talked to another child

Diagram to Show Total Level of Engagement in Learning for Child 5

In terms of emotional engagement with school, this student expressed enthusiasm for school and talked about the range of subjects he enjoys at school, in particular literacy and numeracy.
Strengths and Difficulties Questionnaire (SDQ)

<table>
<thead>
<tr>
<th>AREA OF DIFFICULTY</th>
<th>Conduct Problems</th>
<th>Hyperactivity</th>
<th>Emotional Symptoms</th>
<th>Peer Problems</th>
<th>Pro-Social Behaviour</th>
<th>Total Difficulties</th>
</tr>
</thead>
<tbody>
<tr>
<td>Teacher Perspective</td>
<td>Low Needs</td>
<td>Low Needs</td>
<td>Some Needs</td>
<td>Some Needs</td>
<td>Low Needs</td>
<td>Some Needs</td>
</tr>
</tbody>
</table>

**Table to show Strengths and Difficulties from Parent and Teacher Perspective for Child 5**

Teacher and parent perspective for this child concur in the areas of conduct and pro-social difficulties, but differ in all other areas. The parent said that overall the child did not have difficulties in the areas of emotions, concentration or being able to get on with people, because he is so well supported at home and school, whereas the teacher felt that the child had minor difficulties in these areas which upset him only a little and impacted on friendships and classroom learning only a little.

The teacher said that this child’s successes as a learner include strong literacy and speaking skills as well as drama, whilst parents feel that their child has excelled in every area. His challenges include difficulty with abstract concepts particularly money and with some of his medical appointments from parents point of view. The teacher agrees that abstract concepts are an area of difficulty as is his ability to see himself as age appropriate.

In interview, parents stated that the child’s eagerness to please others sometimes irritated or overwhelmed peers. His teacher felt that his play is an area that may need addressing as he moves to secondary education in September, where he will be with more mature pupils and managing conflict is another area of difficulty.

This student’s current aspirations are to be a Superhero (Spiderman).
<table>
<thead>
<tr>
<th>Strategy Trialled (Description)</th>
<th>Objective/Target for Strategy (What barrier to learning is the strategy intended to overcome)</th>
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</table>
| Enjoyment of books | Explained to the child that I wanted him to read longer books  
Asked him to choose from a range of chapter books - he chose ‘The Witches’ by Roald Dahl.  
Planned a regular reading session 2 times per week  
The child was to rehearse reading before reading a maximum of one page to an adult  
He was given a target to read no more than 2 -3 pages before next reading to an adult. He was also given a reading journal to keep a record of his reading with three comprehension questions to answer about the text - simple retrieval questions at present. | Achievement  
Literacy Skills – increasing reading stamina  
Although the child has very age appropriate reading fluency he prefers to read very short simplistic texts. | Aims:  
To increase reading stamina and confidence when reading longer chapter books. To Increase application of comprehension skills.  
Although the child was initially excited about having a chapter book the reality of the task soon became daunting. He commented on the length of the book and that it was hard. Used opportunities when hearing him read to praise his reading fluency. Used reading rehearsal to reduce the stress of reading aloud ‘cold’ to an adult.  
Introduced reading journal and very small reading targets. Introduced comprehension questions to add purpose to this reading.  
The child is feeling more positive about continuing to read the book and has now read 27 pages. | He is beginning to read more age and ability appropriate texts and feel that the task is achievable.  
He is increasing his vocabulary and using more contextual cues to tackle unknown words.  
His reading is becoming more purposeful. |
<table>
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</tr>
</thead>
<tbody>
<tr>
<td>Gentle guidance over appropriate behaviour</td>
<td>Well being</td>
<td>Difficulty to judge success – will need to see how he behaves in a similar situation.</td>
<td>Discussion caused some stress – he was resistant to the idea of this woman as a stranger. More concerned about being in trouble. Once this was dealt with he was more relaxed about discussing appropriate behaviour and why.</td>
</tr>
<tr>
<td>The child was involved in rehearsals for a concert which involved a number of other schools and a member of staff witnessed the child being over familiar with a female member of staff from another school by leaning on her:</td>
<td>Lack of Life Skills, particularly around personal safety and forming appropriate relationships</td>
<td>The child found it very difficult to understand that this behaviour was not appropriate.</td>
<td>This needs further work</td>
</tr>
<tr>
<td>Initially I told him not to lean - the child found this difficult so removed him from the vicinity. I then spoke to him back at school about the incident. This was linked discussion to issues about personal boundaries and relationships, differences between friends, family and strangers. After discussion gave the child very clear instructions about how he should behave in future.</td>
<td>The child is very small for his age; he can appear precocious and is used to being 'fussed' over. This can lead to him being very trusting and over familiar with strangers.</td>
<td>Could not distance himself from the woman and understand that she was a stranger.</td>
<td></td>
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<td></td>
<td></td>
<td>Regarded her as a friend because she was nice and he had seen her a couple of times at rehearsals.</td>
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<tr>
<td></td>
<td></td>
<td>The child appeared to come to some understanding about family and friends versus people we don’t really know but not embedded in his understanding.</td>
<td></td>
</tr>
<tr>
<td>Strategy Trialed</td>
<td>Objective/Target for Strategy</td>
<td>Outcome</td>
<td>Observable benefit to child</td>
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<tr>
<td><strong>Understanding money</strong></td>
<td><strong>Using real money to count and exchange to understand the value of individual coins.</strong> I introduced a lot of activities around looking at coins and identifying the number on each coin - which coin has the highest number, which is worth more. Used knowledge of number to exchange coins and match values e.g. 10 pennies = a 10p coin.</td>
<td><strong>The child found it difficult to grasp the value of coins and that it is the value of the coins not the number of coins that dictates the amount of money you have.</strong></td>
<td><strong>The child became more confident with money and had a greater understanding of the values of coins. He knows he has to add up the amount each coin is worth to know how much he has not the number of coins he has. He is able to exchange coins for pennies.</strong></td>
</tr>
<tr>
<td><strong>Life skills</strong></td>
<td><strong>Encouraging the child to try very small amounts of new foods. Limiting what is on his plate and giving very clear targets for the amount he should try to eat. Help with feeding – v. recent due to lethargy and recent health problems.</strong></td>
<td><strong>The child has been willing to try new foods in small amounts and this has increased his food choices including more vegetables. He has continued to eat v. small amounts and needs a lot of encouragement to eat his target amount of food. Due to increased lack of appetite I tried feeding him and the transformation was incredible. Happy to eat large spoonfuls and finished his target amounts in a few minutes unlike the usual playing with food with tiny bites – this is a dilemma.</strong></td>
<td><strong>Non-stressful encouragement to try new foods on his terms has made him more confident to try new foods and added more variety to his diet. Recent improvement in the amount he eats via being fed made him very happy and meant he met his target amount very quickly and successfully. Need to consider this against emotional negativity linked to non-age appropriate support – He is physically very able to feed himself!</strong></td>
</tr>
<tr>
<td><strong>Health</strong></td>
<td></td>
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| **Strategy Trialed**  
 **(Description)** | **Objective/Target for Strategy**  
 **What barrier to learning is the strategy intended to overcome)** | **Outcome**  
 **(Successful/unsuccessful - why?)** | **Observable benefit to child**  
 **(For example more engaged in learning, happier in class, reduced disruptive or inattentive behaviour)** |
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</table>
| Opportunities for small group work  
 Using simple instructions with visual cues  
The class are investigating smoothies. In mixed ability groups they had to follow instructions for making smoothies and come up with a description of their smoothie. | Communication Skills:  
 Being able to follow and explain instructions and extend own descriptive vocabulary. | Aims:  
 **To encourage the child to lead a group in a structured way and extend his vocabulary to support his descriptive language**  
 This proved very successful – the child had clear and simple instructions that he had to read to the group and use to identify the tasks they had to do. The child happily took the lead and supported his group in completing the task. This was partly because the task was multi sensory and had a clear purpose. Also the instructions were clear and organised into simple visual stages. The child extended his vocabulary by being given word choices and using his own senses to describe the fruit and the smoothies. He used pre identified descriptive words to choose three key words to describe his smoothie – fruity, tasty sweet. | The child was very proactive and positive about the task. He ceased saying that he was tired and wasn’t hungry and got fully involved in what he was doing. In addition he enjoyed tasting the smoothies and tried all the other groups as part of a ‘what makes a good smoothie’ taste test? (This has helped to further improve his food choices). He happily went through the instructions with his group and reminded them of each stage of the activity. He also helped his group with their tasks and supported them to assess their work. He was very pleased and positive about what he had achieved. |
CHILD 6

Background

Child 6 is 13 years old and attends a Specialist Sports College which caters for 850 children aged from 11 to 16 years. Child 6 attends an Autistic Spectrum Condition Unit attached to a main stream secondary school. Most lessons and learning take place supported in the main stream in class sizes of 30 students, with individual programmes in the Unit where necessary. She also has access to music therapy and occupational therapy through her place in the unit. All children in the unit have a visual timetable located on the wall and copied into their individual planner.

Child 6 is working at National Curriculum level 4/5. She is supported in all lessons by at least one Teaching Assistant, although for some practical lessons, it is necessary to provide 2:1 support. In this school, the researcher liaised with the teacher responsible for the ASC unit and the school SENCo. This student is prescribed medication for hyperactivity.

Engagement

In baseline observations, Child 6 was engaged for 67% of the total time observed. She was observed for Science, Maths and English lessons. The child sat at the back or to one side of the classroom for all lessons, as TAs feel this eliminates her ability to turn round and distract students behind her. The range for her level of engagement was 90% for group work to 46% for independent work where she seemed to lose interest and be most distractible. She appeared to be least distractible during group work when the Interactive Whiteboard was being used when she would frequently put her hand up to ask questions (some relevant and some not). Activities that she was involved in whilst not being engaged include:

- Playing with her clothing
- Playing with her folder
- Playing with her equipment
- Distracting other students
- Moving around the classroom
- Leaving the room
- Scribbling in her book

Diagram to Show Total Level of Engagement in Learning for Child 6

In terms of emotional engagement with school, this student expressed enthusiasm for school and talked about her enthusiasm for particular subject areas including music therapy, physical education, literacy, history,
Strengths and Difficulties Questionnaire (SDQ)

<table>
<thead>
<tr>
<th>AREA OF DIFFICULTY</th>
<th>Conduct Problems</th>
<th>Hyperactivity</th>
<th>Emotional Symptoms</th>
<th>Peer Problems</th>
<th>Pro-Social Behaviour</th>
<th>Total Difficulties</th>
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<tr>
<td><strong>Parent Perspective</strong></td>
<td>High Needs</td>
<td>High Needs</td>
<td>Low Needs</td>
<td>High Needs</td>
<td>Low Needs</td>
<td>High Needs</td>
</tr>
<tr>
<td><strong>Teacher Perspective</strong></td>
<td>High Needs</td>
<td>High Needs</td>
<td>Low Needs</td>
<td>High Needs</td>
<td>Low Needs</td>
<td>High Needs</td>
</tr>
</tbody>
</table>

Table to show Strengths and Difficulties from Parent and Teacher Perspective for Child 6

Parent and Teacher perspectives on areas of difficulty concur in all areas for Child 6 and they also agree that she has severe difficulties overall in the areas of behaviour, concentration, emotions and getting on with people. However, although the parent stated that the difficulties upset or distress the child only a little, the teacher said that they upset or distress her quite a lot. The parent said that this impacted on friendships and classroom learning quite a lot, whilst the teacher reported that friendships were impacted quite a lot, but classroom learning a great deal.

Strengths for this child as a learner from parents point of view include being keen to learn, when she is able to complete tasks things. She enjoys school; she is good at sport if it is a single person sport, public speaking, putting her point of view across, she’s extremely able in drama, likes French, History, English, Dance and Gymnastics. From the teacher’s point of view, successes include good general knowledge, ability to absorb information about anything that she is interested in and she is very polite.

Her challenges as a learner from parent’s perspective are maths (particularly abstract concepts), spatial awareness and poor short term memory. She also has difficulty in understanding the impact of her actions on anybody else, she can very self absorbed and has no idea of safety for herself or anybody else. Teachers feel that impulsivity is her biggest challenge because that puts her in dangerous situations. She will approach people she doesn’t know or misread a situation, and decide on a course of inappropriate action such climbing on top of all the pegs in the changing rooms, climbing on top of filing cabinets and picking up dangerous laboratory equipment in practical lessons before anyone can respond. Increasingly her desire to be independent is a challenge.

In interview, parents stated that the child only thinks of herself in relationships, particularly in relation to her siblings, whereas the teacher had observed incidents of her putting herself in other people’s shoes and apparently empathising with others. What she lacked, however, was the ability to think the situation through and act appropriately in order to demonstrate that empathy. Both parents and teachers in interview stated that her greatest difficulty was her extreme impulsivity and unpredictability with regard to classroom behaviour.

This student has access to a combined modified national curriculum and therapeutic curriculum. The Music Therapist states that her work with this student has a number of specific aims:

- To help with her focus and concentration
- To help sustain and maintain creativity.
- To reduce anxiety.
- To develop self-expression within a creative medium providing an emotional outlet.
- To maintain confidence and self-esteem.
- To promote physical co-ordination.
- Developing her creative ability so that she can express herself, even as she’s older, even when she’s not coming to me anymore to enable her to continue writing songs and playing music
- Having a space that she can control – 40 to 60 minutes to do what she needs to do.

In terms of benefits gained for the student through music therapy sessions (in combination with other positive influences within school), the music therapist feels that the student’s maturity has developed in terms of wanting to sing songs, as opposed use puppets and toys in the sessions and also her focus and concentration have developed. Her confidence gained in the sessions has spilled out into school generally and the way that she behaves outside, when she’s in class and with other students and the way she interacts with them.

This child’s current aspirations are to be a Writer/Author/Film Director.
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<td>Provide tactile examples of what teaching-allowing to touch/see feel before lesson.</td>
<td>Communication skills: level of understanding</td>
<td>This has been used particularly in science where there are many safety issues and temptations to touch. The Head of Science has collaborated with support staff. The child has been taught in 1:1 sessions issues around safety and what is OK to touch and when, and why something is not OK to touch and danger signs to look out for. Successful in that it seems to satisfy need to touch what is around in the lab. Less impulsivity therefore safer in class.</td>
<td>The child has been more aware of safety issues within the lab and this has helped her have more access and inclusion into potentially dangerous practical sessions. To be able to touch in controlled way satisfies need to explore and has curbed impulsivity.</td>
</tr>
<tr>
<td>Consider other methods of recording progress such as mind maps diagrams, writing frames camera and video.</td>
<td>Communication skills: Literacy skills.</td>
<td>Mind maps used to help organize thoughts in English. Writing frames used for written homework tasks with clear structure and concise organization of what and where to put on page. This can help keep student on track and stay focused. Makes other subject tasks manageable.</td>
<td>The child able to manage tasks more effectively and not get lost in flow of irrelevant thoughts. Helps with the organisation of thoughts and tasks and helps embed understanding of the task and the subject.</td>
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<td>Provide adult explanations and discussions with students about coming activities, reminding student to regulate their pace.</td>
<td>Being healthy: inability to regulate own pace</td>
<td>This strategy is used consistently through the day- support staff go through lesson immediately prior to start with reminders of expectation around pace. Child is told when pace is becoming an issue- awareness raised so able to self regulate more.</td>
<td>The child able to increase awareness of suitable and appropriate pace to be working at, and increase self awareness of how to self regulate.</td>
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<td>Create a large number line across the room which can be physically moved across. Provide concrete examples of abstract concepts such as number lines and real objects for establishing concepts. Plan physical activities involving mathematical concepts to aid memory retention. Use real money and clock faces.</td>
<td>Abstract concepts: level of understanding-maths. Money and time.</td>
<td>Roll of lining paper used as number line so physical steps could be taken up and down it. Real money used for money problems and real items used for shopping scenario which was then developed into life skills session-going to shop, purchasing ingredients and then making dish-measures etc.</td>
<td>The child is able to develop understanding at his own pace and gain an improved understanding of number. Using real money for number problems has helped with life skills and coin/notice recognition. Role play with shopping allows rehearsal for real life shopping activity Cooking provides real life context for scales and measures.</td>
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<td>Consider classroom and school environment in terms of noise, light, sound, access-safety in labs and workshops etc.</td>
<td>Sensory processing difficulties.</td>
<td>The Occupational Therapist (OT) has helped with sensory assessments and delivered staff training around sensory issues and stimulation. Risk assessments in place around safety in labs and workshops. One to one sessions in labs and workshops help with safety awareness.</td>
<td>The child is involved in sensory audits leads to increased awareness of dangers and safety issues. She is more able to cope safely when in large mainstream group.</td>
</tr>
<tr>
<td>Provide concrete or visual examples to enhance understanding of abstract concepts.</td>
<td>Abstract Concepts: level of understanding.</td>
<td>Post it notes with hot spots written on used to label potential dangers in labs and technology rooms as a visual reminder to the student of danger spots. This can be turned into a game where the student places the post it notes on the hot spots then talks to an adult about why they are dangerous. Frequent practice will help to embed this in the child’s memory.</td>
<td>Helps child to stop and think around potential danger zones before acting impulsively.</td>
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| **Strategy Trialed**  
| **(Description)** | **Objective/Target for Strategy**  
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| Use (percussion) instruments for student to create rhythms and to practice following instructions to play and copy patterns. Students will need to listen and sustain attention to listening. | Attention/Distractibility /Hyperactivity. | Weekly music therapy session is very successful. Gives a safe space for child to explore expressive outlets, have freedom to express and communicate through music and develop listening and focus skills. One of the highlights of the child’s timetable | The child is able to have allocated time where she can go at the pace she would like to, where the pressure is off in terms of academic learning and where listening and focus are developed through this medium. **HIGHLY RECOMMENDED** |
| Keep task short and achievable and break tasks up with physical activity to expend energy and refocus attention. | Attention/Hyperactivity/ Distractibility. | Relies on sensitivity of support staff-can work well. Tasks sheets with timings of each activity to tick off help focus. Going for a run around the field if aroused, then back in to class can work but only in extreme cases. Difficulty can be then that the activity becomes preferable to lesson and is used as avoidance strategy but with right approach can work well. | When hyperactive and unfocused, this can be a great strategy to help the child gain calmness and reduce tensions in the mainstream class. Aroused states can be hard for teachers and peers to manage, and for student who is not aware of impact. A run or walk to help her calm down can be effective and allow calm access to remainder of lesson afterwards. |
| **Strategy TRIaled**  
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<p>| (For example more engaged in learning, happier in class, reduced disruptive or inattentive behaviour) |
| Carefully plan therapies around curriculum strengths. | Difficulty in forming and maintaining relationships with peers and staff. | When planning to put in additional therapy or Social skill sessions, student involved in discussion so these are put in at optimum times of the week. This helps with maintaining positive relationships and attitude to school. | The child is happier about which lessons are being missed to address statement objectives-student strengths are allowed to develop. There is a balance about what is missed so she is not getting behind and more stressed in weaker subjects. |
| Discuss with child and record in file information around well being and emotional state using a rating scale. We used a scale of 1-10. | Relationship difficulties including lack of understanding of own needs and others. | Really helpful as support staff can see lesson by lesson which ones are going to be the challenges of the day as perceived by student and plans can be made to address high anxiety lessons- less time in room , scale back expectations and shift goal posts etc. | When the child is unable to communicate to support staff verbally around anxieties, folder gives instant view of situation and helps support staff understand student and better prepare for managing her within lesson. |</p>
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<td>Teach life skills specifically and frequently.</td>
<td>Lack of life skills, particularly around personal safety and forming appropriate relationships.</td>
<td>Hard to measure as not seen applying in out of school context. We can see progress during structured sessions within school time, and have clear set of shopping/road safety competencies to work through with guidance from OT.</td>
<td>Increased awareness of skills needed for personal safety and responsibility. More aware of skills needed for independence. Less risk to safety when out of school and in public. Can lead to false sense of security- ‘I’ve done that now!’</td>
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<tr>
<td>Provide opportunities for the student to take on special roles within the school – ‘Eco Rep, office services ‘Duty Student’ for day.</td>
<td>Immaturity and lack of understanding about employment opportunities and job roles.</td>
<td>Very successful. Has shown that the child’s ability to rise to the occasion and take responsibility seriously. Staff more aware of fact she can be capable in these areas.</td>
<td>Has been good for independence skills and self esteem.</td>
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<td>Provide specific teaching around independence and safety.</td>
<td>Impulsive behaviour/no sense of danger regarding self or others.</td>
<td>This needs to be ongoing over time around specific issues to be successful- using clear broken record technique- ‘If you want to go by yourself, you need to do this and this to be successful. If you don’t, then this will happen.’</td>
<td>The child is clear about boundaries and consequences. Issues talked through when she is calm so processing is better, rather than in heat of the moment when communication skills fall away. Over time message begins to sink in, and new responsibilities can be added in.</td>
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CHILD 7

Background

Child 7 is 14 years old and attends a Mainstream Secondary Academy School with a Specialism in Citizenship and Enterprise, catering for children aged 11 to 18. She works in class sizes of between 23 – 25 children. She is working at Level 2a of National Curriculum and at Foundation Learning Tier for core subjects (English, Maths, Science). She attends a small group run by a Higher Level Teaching Assistant once a fortnight for focussed delivery on spelling, sentence structure and handwriting. In this school, the researcher liaised initially with the school SENCo (Director of Personalised Learning) and a HLTA and a Learning Mentor, then more latterly with the Teacher responsible for FLT.

Engagement

Baseline observations show that Child 7 was engaged for 40% of the time observed. The range for her engagement levels were 20% for group work and 90% for individual work, where she was supported by a TA. The child started the lesson on a table near to the teacher but was moved twice during the lesson for inappropriate behaviour. An Interactive Whiteboard was not used and the class was taught by a supply teacher who the student was familiar with. Activities she was involved in whilst not engaged include:

- Distracting other students
- Playing with equipment
- Tipping on chair
- Biting her nails

![Diagram to Show Total Level of Engagement in Learning for Child 7](image)

In terms of emotional engagement, this student demonstrated ambivalence towards school, saying that some of it was good and some of it was bad, though she did have a preference for some subjects, including art, performing art and physical education.
Table to show Strengths and Difficulties from Parent and Teacher Perspective for Child 7

Both parents and Teacher agree that overall the child has serious difficulties in the areas of behaviour, concentration and being able to get on with people and agree about difficulties in the areas of conduct and hyperactivity difficulties. The parent said that the child’s difficulties upset or distress her quite a lot and they impact on friendships and classroom learning a great deal, whilst teaching staff reported that the difficulties upset the child only a little but impact on friendships and classroom learning quite a lot. The teacher stressed that in situations where 1:1 support is provided, her difficulties in the areas of concentration and behaviour are greatly reduced.

The parent said that the child’s successes include reading, spelling and lately success in maths, whilst education staff reported that her verbal language skills (communication with others, composing and writing sentences) are an area of success. Her biggest challenge from parents perception is lack of concentration, teachers confirm that in the classroom, she needs prompts and reminders to remain on task and can be highly distractible requiring small steps to achieve progress. Her individual learning plan states that she is more able to sustain concentration when working in small groups and requires repetition of instructions. Her short and long term memory are weak, and she has difficulty approaching tasks in a logical way.

The Teacher said that her ability to form friendships on an equal basis is an area in need of development for this child as she has a tendency to attempt to dominate friends. Parents report that she needs to be monitored closely in friendships to avoid her becoming involved in socially inappropriate activities.

This child’s current aspirations are to be a Nursery Nurse.
### Effective Teaching and Learning Strategies for Child 7 (feedback from Foundation Learning Tier Teacher)

<table>
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<td>Use positive language; tell the child what you would like them to do rather than what you would not like them to do.</td>
<td>Communication skills: level of understanding.</td>
<td>We try to use this strategy across the foundation phase.</td>
<td>Previously found that children would do precisely what were asked not to do, not out of badness but because it was the information that stayed in their minds.</td>
</tr>
<tr>
<td>Clear wall display created by the child. The child was given the chance to design how the display should look and actually take part in creating it for the wall.</td>
<td>So that the child can gain enjoyment and knowledge from the display. Cluttered displays have less impact on the learning of the child.</td>
<td>Successful to all the children involved in this task as they had to use team work, cooperation and discussion. They have taken more pride in their work and the classroom due to ownership of this display.</td>
<td>The child talks about the display, often looks at it and has used it in discussion.</td>
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<tr>
<td>Provide laptop to produce written work for display. Variety of activities presented in different formats, for example power point, leaflet.</td>
<td>Communication skills: literacy skills and organization of work and creativity. Social skills – working with partner.</td>
<td>The child enjoys producing work on laptop and feels it is important when work is to be displayed. When producing work into power point the child rises to the challenge of organizing the information for each slide. Works well with a partner showing cooperation and good communication.</td>
<td>Improving reading and enjoyment of reading child’s own work is raised. Pride in work done, desire to share work and explain decisions made regarding organization of work Behaviour is better and the child is on task for longer</td>
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<tr>
<td>Environment.</td>
<td>To try to make the environment free from distraction.</td>
<td>This was difficult as the layout of my classroom is quite open plan. People in school walk past our teaching and learning area to get to other classrooms so this can have a negative impact, especially on learners with special needs. I have managed to get permission to put display boards up to block the area. Unfortunately this only blocks visual distraction and not noise.</td>
<td>There has been a positive impact. During busy walk through times the distraction is lessened. The child sits at the opposite side of the room also which means less distraction caused by any noise.</td>
</tr>
<tr>
<td>Routine and structure and approach.</td>
<td>To provide a break to the lesson. To get into a new routine.</td>
<td>On a Tuesday we have a three hour session which is a long time for the class to be in one place with one teacher. We have now put an intervention in place so that in the second hour the child and a small group receive intervention from a HLTA. This means they have a break from the environment and walk to the other classroom. Work can be more focused to their ability and due to the smaller group size, more support is available.</td>
<td>The child is beginning to remember this new routine but it has only been in place 2 weeks now. It means that I can set smaller task targets to be completed in the first hour. She then has the more focused reading/spelling support for an hour and then back into class with the full group to round up the days work.</td>
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<tr>
<td>Understanding and simplicity.</td>
<td>Break down instructions Small group work where possible.</td>
<td>In English lessons an LA now sits on the child’s table along with 3 other children. His objectives for the child are specifically on breaking down instructions. Due to this smaller group setting the child is confident enough to ask questions about understanding of tasks and feels reassured by the support of the LA. The child seemed to make more effort in her work due to the closer supervision, she wanted to please.</td>
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<tr>
<td>Simplicity Understanding.</td>
<td>To ensure that instructions, directions and tasks are broken down into short, achievable, easily understood steps.</td>
<td>We have begun work on life in South Africa to tie in with the World cup. A recent task was the learners had to watch a video clip from a south African child about their life, day to day routines, family etc. The class then had to write a letter in response. The child and other children were given a check list of things to include. They were encouraged to tick off the list as they added the info to the letter. This worked well as they were able to see that it was a successful piece of work. i.e. if you can tick it then you are successful.</td>
<td>This was useful and could be used in paired work. Children read their letters aloud to each other and the partner was to check off if they had included the info in the letter.</td>
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|-----------------|---------------------------------------------------|---------------------------------|---------------------------------------------------|
| Provide opportunities for small group work.  
Teach life skills specifically. | Difficulty in understanding personal/ social dangers. | Learners were helped to gain an understanding of sexual exploitation and vulnerability.  
We discussed what makes a safe/unsafe friendship. | Working in a small group situation with the learning mentor and outside agency (Barnardo’s) the child was able to express worries and questions in a safe environment |
| **Approach.** | Appearing confident volunteering information and then becoming overwhelmed. | The child sometimes will shout out during a lesson (often this can be relevant information or the correct answer). When she is asked to repeat or share it again she shies away. She definitely responds well to coaxing the answer again through praise. | If praised the child clearly feels rewarded and will participate. |
CHILD 8

Background

Child 8 is 13 years old and attends a Specialist Mathematics and Computing School catering for children aged 11 to 18, where she is in year 9 in classes of varying size according to the subject area (Maths 10/11 children, English skills 15, Science 20, ICT 20, Technology 20).

She does not have a Statement of Educational Needs, so is not therefore entitled to 1:1 support in the classroom. There is, however, support available in all her lessons should she need it as there are Learning Support Assistants in most of the academic subject classes that she attends. She is working at National Curriculum Level 4/5. She has a Statement in Lieu. In terms of her literacy skills, she needs help in putting some of her sentence structure and wording need into order, but she is generally accurate. She is monitored with academic updates each term. In this school, the researcher liaised with the school SENCo and a teaching assistant.

Engagement

Baseline observations show that Child 8 was engaged for 52% of the total time observed. She was observed during a maths lesson which parents feel is the area she finds most difficult. She was sat near the front of the class on a table on her own. An Interactive Whiteboard was not used for this lesson. The range for her level of engagement was 42% for group work and 57% for individual work. Activities she was involved whilst not engaged include:

- Playing with her fingers
- Playing with equipment
- Talking to other students on the desk behind
- Looking out of the window

Diagram to Show Total Level of Engagement in Learning for Child 8

In terms of emotional engagement with school, this student could not express a clear opinion, answering “I don’t know” when asked whether she liked school, though she expressed a preference for Drama and Art over other subjects/curriculum areas.
Strengths and Difficulties Questionnaire (SDQ)

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<td>High Needs</td>
<td>High Needs</td>
<td>High Needs</td>
<td>Low Needs</td>
<td>High Needs</td>
</tr>
<tr>
<td><strong>Teacher Perspective</strong></td>
<td>High Needs</td>
<td>High Needs</td>
<td>High Needs</td>
<td>High Needs</td>
<td>High Needs</td>
<td>High Needs</td>
</tr>
</tbody>
</table>

Table to show Strengths and Difficulties from Parent and Teacher Perspective for Child 8

Parent and Teacher perspective agree in all areas of need with the exception of Pro-Social Behaviour. Overall the parent feels that her child has severe difficulties in the areas of emotions, concentration, behaviour and getting on with people whilst the Teacher said that her difficulties are serious. The parent reports that these difficulties upset or distress the child only a little, but interfere with friendships and classroom learning quite a lot, whilst the Teacher stated that the difficulties upset the child quite a lot to a great deal (depending on her mood) and interfere with Friendships quite a lot (but this would have been a great deal a year ago) and classroom learning quite a lot.

Successes in this child’s learning include reading, art and drama as well as getting the bus to school independently, whilst teachers feel that she does well in more practical such as ICT, PE, Art and Technology. Challenges from parent’s perception are lack of focus, lack of understanding leading to inappropriate behaviour, whilst teachers feel that her lack of engagement with school life due to inappropriate peer relationships has been a major challenge, which is now settling down.

Paediatric reports confirm that this child will have difficulty in taking in complex instructions, that information should be broken down in manageable bits and that she will have difficulties in organising herself and with time management. The report notes that education staff should be sensitive and patient and work in partnership with parents to ensure her needs are met.

Parents stated that the inability to read social cues and understand others is a barrier to developing true friendships, whilst the Teacher reports that the child may bully younger friends and be more easily led by older friends. The SENCo states that the main concerns are centred on her personal bodily immaturity and lack of life skills and her inability to fully recognise potential dangers.

This child’s current aspirations are to be a Gymnast.
<table>
<thead>
<tr>
<th>Strategy Trialed (Description)</th>
<th>Objective/Target for Strategy (What barrier to learning is the strategy intended to overcome)</th>
<th>Outcome (Successful/unsuccesful - why?)</th>
<th>Observable benefit to child (For example more engaged in learning, happier in class, reduced disruptive or inattentive behaviour)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Provide a key person for the child and parent to contact ensuring swift responses and communication of any issues/difficulties. Effective use of school planner is essential</td>
<td>Communication skills: Level of Understanding.</td>
<td>Successful – enabled rapid dealing of issues (good or bad) and necessary interventions.</td>
<td>A happier child, more engaged with personal/social issues, less negative attitude. Happier school/home communication.</td>
</tr>
<tr>
<td>Responsibility within an extra curricular club with younger children.</td>
<td>To give responsibility and to encourage interaction with peers and younger children to promote enjoyment and encourage positive contributions.</td>
<td>Successful – in charge of various small tasks involving communication with other children.</td>
<td>A more sociable and less withdrawn children.</td>
</tr>
</tbody>
</table>
CHILD 9

Background

Child 9 is 19 years old and attends a Specialist Communication and Interaction Special School. The school caters for pupils aged 2 ½ to 19 who have profound, severe or moderate learning difficulties (PMLD). He is placed in a class size of 8 young people. There are 3 adults in the class, including the Teacher. He is working at Level 2 (Level 1 for maths) of the National Curriculum as well as working on ASDAN Life Skills and some Entry Level Qualifications. In this school, the researcher liaised with the class teacher who is also Assistant Head Teacher. This student is prescribed medication for hyperactivity.

Engagement

Observations for Child 9 show that he was engaged for 100% of the time. He was observed during a Community Lesson on Shopping for which the teacher used a whiteboard and discussions with students about the types of shops they might visit and what items they could purchase from them. During individual work the students were requested to find pictures of different categories of well known high street shops on the internet to print out so that they could label the types of items they might purchase from the shops. Child 9 was enthusiastic throughout the lesson, but although he was engaged, when a TA noticed that he was selecting pictures of unknown shops and then struggling to identify what might be purchased and therefore attempted to refocus him, he became frustrated and angry swearing at the computer and rejecting her offers of help.

Diagram to show level of engagement in learning for Child 9

In terms of emotional engagement, the discussion with this student ended quickly in order to avoid discomfort as his mood on the day was not conducive. He did express a preference for Community Lessons and answered affirmatively when asked whether he liked school.
Strengths and Difficulties Questionnaire (SDQ)

<table>
<thead>
<tr>
<th>AREA OF DIFFICULTY</th>
<th>Conduct Problems</th>
<th>Hyperactivity</th>
<th>Emotional Symptoms</th>
<th>Peer Problems</th>
<th>Pro-Social Behaviour</th>
<th>Total Difficulties</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Parent Perspective</strong></td>
<td>High Needs</td>
<td>High Needs</td>
<td>Low Needs</td>
<td>High Needs</td>
<td>Low Needs</td>
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</tr>
<tr>
<td><strong>Teacher Perspective</strong></td>
<td>High Needs</td>
<td>High Needs</td>
<td>Low Needs</td>
<td>High Needs</td>
<td>Low Needs</td>
<td>High Needs</td>
</tr>
</tbody>
</table>

Table to show Strengths and Difficulties from Parent and Teacher Perspective for Child 9

Parent and teacher perspectives of Child 9 match exactly. Overall the teacher reports that the child has serious difficulties in the areas of concentration, behaviour, emotions and getting on with people, whilst the Parent reports that these difficulties are severe. In addition both teacher and parent said that the difficulties upset or distress him a great deal, and impact on both friendships and classroom learning quite a lot (teacher) or a great deal (parent).

Success as learner for this child from parents point of view are enthusiasm to be involved and keenness to help others as well as his reading skills. From the teacher’s view point, he enjoys sport and anything physical or practical such Food Technology and Art. He also enjoys joint work where the class work together to produce a piece of literacy.

Parent’s perspective of challenges in learning for this child is that he becomes frustrated when he can’t achieve leading to temper outbursts. Parents also feel that this child can be overpowering in his relationship with others which may be a barrier to forming friendships. The teacher concurs with this view and adds that he needs to work on ‘being nice to people’ and exchanging pleasantries. This is an area that causes problems in the classroom, as does the inability to stay on task for longer than 15 minutes at a time.

Parents and teacher views agree that this child has a barrier to achieving success in the area of inappropriate interactions with others which have already resulted in one night in legal custody. His inability to understand ‘appropriateness’ in social communications has implications for work experience as well as supervision within the school environment necessitating 1:1 supervision 100% of the time in order to protect him and other vulnerable young people.

This child’s current aspirations are to go college, where he hopes to study mechanics, sports and leisure, travel or tourism.
### Effective Teaching and Learning Strategies for Child 9 (feedback from Class Teacher)

<table>
<thead>
<tr>
<th>Strategy Trialed (Description)</th>
<th>Objective/Target for Strategy (What barrier to learning is the strategy intended to overcome)</th>
<th>Outcome (Successful/unsuccessful - why?)</th>
<th>Observable benefit to child (For example more engaged in learning, happier in class, reduced disruptive or inattentive behaviour)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Encourage lunchtime and teaching staff to work together to support in enabling the child to manage issues as unobtrusively as possible in order to build student independence.</td>
<td>To build on child independence and self esteem.</td>
<td>Successful – the child is given opportunity to make decisions in a supportive way that does not interfere with independence building.</td>
<td>Improved relationships with peers. Improved relationship with staff.</td>
</tr>
<tr>
<td>Provide adult explanations and discussions with the child about coming activities.</td>
<td>To ease anxiety and therefore disruptive behaviors.</td>
<td>Successful – the child is not as anxious and is happier to go along with activities.</td>
<td>The child is happier in class.</td>
</tr>
<tr>
<td>Provide low impact 1:1 supervision where necessary. Ensure that the child is not left in a position where they are able to take advantage of others.</td>
<td>To lower the risk of the child acting on destructive impulsive acts.</td>
<td>Successful – less complaints from other children.</td>
<td>The child is more aware of his own behaviors and how this impacts on others.</td>
</tr>
<tr>
<td>Use role play and social scripts to talk through social scenarios and demonstrate appropriate and inappropriate interactions with others.</td>
<td>To improve understanding of social scenarios.</td>
<td>Successful – less complaints from others</td>
<td>The child is more aware of his own behaviors and how this impacts on others.</td>
</tr>
<tr>
<td>Allow extra time for discussions to ensure understanding of basic information.</td>
<td>To aid student understanding and support lessons.</td>
<td>Successful – the child is more confident in his work and therefore more motivated.</td>
<td>The child is happier in class.</td>
</tr>
</tbody>
</table>
| **Strategy Trialed**  
(Description) | **Objective/Target for Strategy**  
(What barrier to learning is the strategy intended to overcome) | **Outcome**  
(Successful/unsuccessful - why?) | **Observable benefit to child**  
(For example more engaged in learning, happier in class, reduced disruptive or inattentive behaviour) |
|---|---|---|---|
| Provision of 1:1 supervision 100% of the time. | To lower the risk of the child acting on destructive impulsive acts. | Successful – less complaints from other children. | The child is more aware of his own behaviors and how this impacts on others.  
The child is in less trouble.  
No serious incidents have occurred. |
| Ensure supervision is low impact and subtle. | To build on independence and self esteem. | Successful – the child is given opportunity to make decisions in a supportive way that does not interfere with independence building. | Improved relationships with peers.  
Improved relationship with staff. |
| Provide a ‘quiet time’ area where the child can go to calm down. | To build on independence and self esteem. | Successful – the child is given a way out if classroom is too noisy or if he feels he needs time out. | Improved behavior and confidence in his decision making.  
The child is in less trouble. |
| Where changes to timetables and schedules are necessary ensure that the student is informed as soon as possible and given an appropriate explanation. | To ease anxiety and therefore disruptive behaviors. | Successful – student is not as anxious and is happier to go along with activities. | The child is happier in class. |
| Be prepared to repeat instructions. | To aid understanding and support lessons. | Successful – the child is more confident in his work and therefore more motivated.  
Staff more patient. | The child is happier in class. |
<table>
<thead>
<tr>
<th><strong>Strategy Trialed</strong> (Description)</th>
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</tr>
</thead>
<tbody>
<tr>
<td>Seat the child at the front of the room so that they can maintain eye contact with the teacher and receive both auditory and visual input.</td>
<td>To aid understanding and support lessons.</td>
<td>Unsuccessful – student wants to see what others are doing and so is constantly turning around in his seat which distracts him from his work and distracts others in the class.</td>
<td>N/a.</td>
</tr>
<tr>
<td>Provide plenty of positive feedback and be positive about child’s efforts.</td>
<td>To motivate child to do the right thing.</td>
<td>Successful – the child responds very well to positive feedback and is more motivated to do well.</td>
<td>The child is happier in class. Increased motivation.</td>
</tr>
<tr>
<td>Ensure that the consequences of not following rules are consistently applied.</td>
<td>To motivate the child to do the right thing.</td>
<td>Successful – the child is more aware of his actions and happier to accept consequences.</td>
<td>The child is happier in class. Better decisions made by child. The child is more thoughtful about his actions when reminded of consequences.</td>
</tr>
<tr>
<td>Seat the child at the back of the room where they can see everyone and leave the room when necessary.</td>
<td>To keep student focused and reduce distractions.</td>
<td>Successful (in small classroom and small group setting)– child is more able to make the decision to leave the room when necessary without disrupting others and is less distracted himself as he is able to see what everyone is doing.</td>
<td>The child is happier in class. The child is more focused in his work and on teacher.</td>
</tr>
<tr>
<td>Provide adult explanations and discussions with students about coming activities, reminding students to regulate their pace.</td>
<td>To ease anxiety and therefore disruptive behaviors.</td>
<td>Successful – better quality of work has been produced with minimal interference into what his peers are doing.</td>
<td>The child is more aware of expectations of him and has a better understanding of how to fulfill requirements. He is able to complete work to a high standard and focus on the task.</td>
</tr>
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</tr>
<tr>
<td>Provide opportunities to meet strangers through organised visits and visitors to the school in order to build awareness of risks whilst working on strategies to avoid or remove them.</td>
<td>To improve understanding of social scenarios.</td>
<td>On-going – the child cannot contain what he thinks and has a need to share with someone no matter how inappropriate. The child may show awareness of risks but doesn’t always act on it.</td>
<td>Practice may instill a systematic protocol the child can follow in time.</td>
</tr>
<tr>
<td>Discuss in small groups and individually what bullying actually is and reasons why people bully others – using concrete examples and simple language.</td>
<td>To improve relationships with others.</td>
<td>On-going – the child is starting to become more aware of how his actions may effect how others act towards him.</td>
<td>Continued work in this may improve relationships with peers.</td>
</tr>
<tr>
<td>Provide 1:1 support giving independence when appropriate.</td>
<td>To build on independence and self esteem.</td>
<td>Successful – support that is proactive in understanding when it is appropriate to intervene and when to allow student to make a mistake; and then talk through situation to allow student to think through any issues has been very beneficial to the child’s self esteem and self improvement when presented with a similar situation.</td>
<td>The child is more aware of his own actions and has been able to show improvement in making the right decision.</td>
</tr>
<tr>
<td>Provide plenty of positive feedback and be positive about students’ efforts.</td>
<td>To build up student self esteem and motivation.</td>
<td>Successful – the child has been highly motivated and been able to demonstrate positive behaviour’s</td>
<td>The child is happier in class. The child wants to please.</td>
</tr>
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<td><strong>Strategy Trialed (Description)</strong></td>
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</tr>
<tr>
<td>Pair the child with other students who are good role models for paired activities.</td>
<td>To aid understanding and support lessons.</td>
<td>On-going – the child copies desired behaviour and is more motivated to work as a team however, can often take over the task and become frustrated in sharing resources.</td>
<td>The child is able to work with others and practice social skills with a peer.</td>
</tr>
<tr>
<td>Provide a positive learning environment with opportunities to support engagement with praise and encouragement.</td>
<td>To build up self esteem and motivation.</td>
<td>Successful – the child has been highly motivated and been able to demonstrate positive behaviour’s</td>
<td>The child is happier in class. The child wants to please.</td>
</tr>
<tr>
<td>Withdraw from lesson/activity if behaviour becomes disruptive</td>
<td>To give child time to think about their actions and give opportunities to think about options to self correct mistakes.</td>
<td>Successful – the child uses time and space away from the situation to reflect and is more likely to understand what acceptable behaviour is and what will not be tolerated.</td>
<td>The child is happier in an environment where boundaries are enforced and dealt with in a consistent manner.</td>
</tr>
<tr>
<td>Provide advice about appropriate behaviour</td>
<td>To provide some structure for the student to think/talk through issues/situations.</td>
<td>Successful – the child is given a guideline to work with and has shown that he can follow this.</td>
<td>The child is happier in most situations. The child has a want to please and get over barriers a lot easier.</td>
</tr>
<tr>
<td>Consider how the child can participate in external work experience and what kind of support they will need for this.</td>
<td>To build on independence and self esteem. To lower the risk of the child acting on destructive impulsive acts.</td>
<td>On-going – an external work placement has been found and student will go once a week with a known member of staff. He has attended half a day so far. He has struggled with the difference between his own expectations of what it would be like and the reality of the placement.</td>
<td>The child is very happy to have this opportunity.</td>
</tr>
</tbody>
</table>
Facing the challenge and shaping the future for primary and secondary aged students with Foetal Alcohol Spectrum Disorders (FAS-eD Project)

SECONDARY FRAMEWORK: TEACHING AND LEARNING STRATEGIES TO SUPPORT SECONDARY AGED STUDENTS WITH FOETAL ALCOHOL SPECTRUM DISORDERS (FASD)

Carolyn Blackburn, Project Researcher, October 2010
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Project Director: Professor Barry Carpenter, OBE
## Understanding FASD

**Guiding Principles to Supporting a Student with FASD.**

### Be Healthy:
- Food/Diet Issues.
- Medical/digestion issues and personal care needs.
- Lack of understanding about personal hygiene.
- Inappropriate sexual behaviour.

### Stay Safe:
- Difficulty in understanding of personal/social dangers/danger of actions to self and other students.
- Inappropriate interactions with other vulnerable students.
- Vulnerability due to trusting nature, lack of stranger danger and engaging with unsuitable peers.
- Becoming distressed.
- Inflexibility over changes to timetables/schedules.
- Impulsive behaviour/no sense of danger regarding self and others.
**Enjoy and achieve:**
- Communication: level of Understanding.
- Communication: literacy skills.
- Difficulty with abstract concepts (including maths).
- Sensory processing difficulties (including inattention/ distractibility/ hyperactivity).
- Difficulty with self image.
- Memory difficulties/ lack of organisation skills/not following rules

**Make a Positive Contribution:**
- Difficulty in forming and maintaining relationships with peers and adults.
- Over exuberance/changeable emotions/temper.
- Becoming overwhelmed during special events.

**Achieve Economic Well Being:**
- Limited understanding of the value of money.
- Unrealistic expectations/awareness of self.
- Lack of life skills, particularly around personal safety and forming appropriate relationships.
- Immaturity and lack of social understanding about employment opportunities and job roles.

Suggested Adult Provision Questionnaire.
Inclusion Checklist.
Further Reading and Information.
What are Foetal Alcohol Spectrum Disorders?

Foetal Alcohol Spectrum Disorders (FASD) operates as an educational umbrella term to represent the range of effects caused by prenatal alcohol exposure. It encompasses the following diagnostic terms:

**Fetal Alcohol Syndrome (FAS)** is used to describe a specific identifiable group of children who all share certain characteristics: a specific set of facial features, central nervous system (CNS) dysfunction, and often growth deficiency and a scattering of other birth defects resulting from confirmed maternal alcohol exposure.

**Partial Fetal Alcohol Syndrome (pFAS)** indicates confirmed maternal alcohol exposure. A child with pFAS exhibits some, but not all, of the physical signs of FAS, and also has learning and behavioural difficulties which imply central nervous system damage.

**Alcohol-related Neurodevelopmental Disorder (ARND):** A child with ARND exhibits central nervous system damage resulting from a confirmed history of prenatal alcohol exposure. This may be demonstrated as learning difficulties, poor impulse control, poor social skills, and problems with memory, attention and judgement.

**Alcohol-related Birth Defects (ARBD):** A child with ARBD displays specific physical anomalies resulting from confirmed prenatal alcohol exposure. These may include heart, skeletal, vision, hearing, and fine/gross motor problems. (Stratton, Howe and Battaglia 1996)

FAS is the most easily recognisable condition under the umbrella due to facial anomalies which are a distinctive hallmark of FAS (see Figure 1). These are formed only when there is maternal alcohol consumption during the first three months of pregnancy and will dissipate with age. The three core features are short palpebral fissures, thin upper lip and an elongated philtrum.

![Figure 1: Facial Features of a Child with a Full FAS Diagnosis - Darryl Leja. www.nih.gov](image_url)

Permanent damage to developing organs and bones can occur at particular periods of pregnancy. Damage to
the Central Nervous System continues throughout pregnancy and results in changes to the structure of the brain which cannot be reversed and persist throughout life. This damage results in difficulties for students in many areas of the curriculum in the acquisition of new information, linking new information to previously learned information and the practical application of knowledge gained. There are a number of secondary disabilities associated with FASD, the occurrence of which can be reduced by a range of protective factors.

Secondary disabilities include:

- Mental Health problems
- Disrupted school experience
- Trouble with the law
- Confinement (for mental health problems, alcohol/drug problems or crime)
- Inappropriate Sexual behaviour
- Alcohol/drug problems

Protective factors include:

- Living in a stable and nurturant home for over 72% of life
- Being diagnosed before the age of 6 years
- Never having experienced violence against oneself
- Staying in each living situation for an average of more than 2.8 years
- Experiencing a good quality home (10 or more of 12 good qualities) from 8 to 12 years
- Being found eligible for disability services
- Having a diagnosis of FAS (rather than pFAS)
- Having basic needs met for at least 13% of life (Streissguth and Kanter 1997)

How Does a Student Affected Differ from His/Her Peers?

FASD can be, and is often diagnosed alongside other disabilities such as Autistic Spectrum Disorder (ASD), Attention Deficit Hyperactivity Disorder (ADHD) Attention Deficit Disorder (ADD) Attachment Disorders and Sensory Integration Disorder (SID) (O’Malley 2007). These co-existing disorders usually have overlapping symptoms with FASD; for example, students with ASD will present with social communication difficulties and students with ADHD with hyperactivity and impulsivity, which are common features of FASD. A full diagnostic assessment is important in order to ensure accurate diagnosis. This can be carried out by a Clinical Geneticist or FASD Specialist.

There are some features of FASD which may be evident in other disorders and disabilities, but these features can be so pronounced in students with FASD, depending on the severity of presentation, that it is worth highlighting them. These include:
• **Memory/Learning/Information Processing** difficulties, including inconsistent retrieval of learned information, being slow to learn new skills, inability to learn from past experiences, problems recognising consequences of actions and problems with information processing speed and accuracy.

• **Planning/Temporal skills** including needing considerable help to organise daily tasks, inability to organise time, not understanding the concept of time, difficulty in carrying out multi-step tasks.

• **Behaviour Regulation/Sensory Motor Integration** difficulties including poor management of anger/tantrums, mood swings, impulsivity, compulsive behaviour, perseveration, inattention, inappropriately high or low activity level, lying/stealing, unusual (high or low) reaction to sound/touch/light.

• **Abstract Thinking/Judgement** difficulties including exercising poor judgement, requiring constant supervision, poor abstract thinking, poor understanding of safety and danger.

• **Spatial Skills/Spatial Memory** difficulties, gets lost easily, has difficulty in navigating from one destination to another.

• **Social Skills and Adaptive Behaviour** including behaving at a level notably younger than their chronological age, poor social/adaptive skills.

• **Motor/Oral Motor Control** including poor/delayed motor skills, poor balance, difficulty in feeding (chewing, swallowing and sucking). A lack of clarity in speech may be compounded by cleft palate or palatal dysfunction. This can affect children in the following ways:

  Children with cleft palate and FAS may have specific needs regarding their speech and resonance. If they have a cleft palate or velopharyngeal dysfunction (i.e. their palate is not functioning correctly), they should be under the care of a Regional Cleft Palate Centre. There are two aspects to assessing a child with cleft palate:

  1. **Resonance** – this will be determined by how effectively their palate functions. There may be normal resonance or there may be signs of increased nasality – hypernasality or audible air escape

  2. **Articulation** – the production of consonants and vowels.

  If there are difficulties in either or both of these areas then this can impact on their intelligibility. This may lead to frustration if they are not understood resulting in inappropriate behaviour. Liaison with the Speech and Language Therapist at the Regional Cleft Palate Centre would be recommended to ensure that young people are supported in the best way possible. It may be that speech targets can
be incorporated in their general language and social programme.

- **Cognition/Academic Achievement**, including working at curriculum levels below peers, requiring constant repetition of instructions, rules and subject areas.

- **Language/Social Communication** including lack of understanding of social cues, strong expressive language coupled with poor receptive language skills, lack of empathy for others. Communication can also be affected by cleft palate (see above) and the following factors:
  
  1. Hearing - conductive hearing loss as a result of chronic otitis media (glue ear) is common. If the young person is not understanding/responding then their hearing should be checked to eliminate the compounding factor of a hearing loss.

  2. Hoarseness - can be common and makes the voice sound distinctive.

- **Obvious physical symptoms** may include distinctive facial features (FAS only), small head (microcephaly), small stature, organ damage and skeletal damage.
  
  (Astley, 2004; Birmingham Children’s Hospital, 2010)

It is important to recognise the diagnoses that a student with FASD has received, whilst bearing in mind that the student has structural damage to their central nervous system of an individual nature and will require understanding and patience from adults to achieve success.

**What are the effects of damage to different regions of the brain?**

Each student with FASD is individual and their learning difficulties and disabilities will depend on the extent of damage caused to the developing organs and brain (see table below).

<table>
<thead>
<tr>
<th>Area of Brain Damaged</th>
<th>Area of Learning Affected</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Amygdala</strong></td>
<td></td>
</tr>
</tbody>
</table>
  - Ability to regulate reactions with the environment such as whether to attack or escape
  - Decision Making |
| **Basal Ganglia**     |  
  - Initiation and modulation of motor activity
  - Motor timing behaviours, specifically difficulty in producing accurate and consistent motor responses when intercepting a moving target or moving through a spatial target in a specified amount of time
  - Cognitive functioning |
| **Caudate Nucleus**   |  
  - Regulation of the transmission of information regarding worrying events or ideas between the thalamus and the orbitofrontal cortex |
<table>
<thead>
<tr>
<th>Region</th>
<th>Effects</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cerebellum</td>
<td>- Effects on learning and memory as well as threshold control activities</td>
</tr>
<tr>
<td></td>
<td>- Postural control, gait, balance, and the coordination of bilateral</td>
</tr>
<tr>
<td></td>
<td>movements</td>
</tr>
<tr>
<td></td>
<td>- Behaviour and memory</td>
</tr>
<tr>
<td>Corpus Collossum</td>
<td>- Speed of processing</td>
</tr>
<tr>
<td></td>
<td>- Connecting two sides of the brain</td>
</tr>
<tr>
<td>Frontal Lobe</td>
<td>- Executive function</td>
</tr>
<tr>
<td></td>
<td>- Co-ordination</td>
</tr>
<tr>
<td></td>
<td>- Processing and labelling/memory</td>
</tr>
<tr>
<td></td>
<td>- Focussing and Shifting attention</td>
</tr>
<tr>
<td></td>
<td>- Planning</td>
</tr>
<tr>
<td></td>
<td>- Understanding consequences</td>
</tr>
<tr>
<td></td>
<td>- Maintaining and shifting attention</td>
</tr>
<tr>
<td>Globus Pallidus, Acumbens,</td>
<td>- Decision Making</td>
</tr>
<tr>
<td>Thalamus, Cortex circuit</td>
<td></td>
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<tr>
<td>Hippocampus</td>
<td>- Ability to consolidate new memories</td>
</tr>
<tr>
<td></td>
<td>- General learning and emotional regulation</td>
</tr>
<tr>
<td>Nucleus Acumbens</td>
<td>- Links to reward, pleasure, laughter, addiction, aggression, fear, and</td>
</tr>
<tr>
<td></td>
<td>the placebo effect</td>
</tr>
<tr>
<td>Parietal Lobe</td>
<td>- Spatial awareness</td>
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<tr>
<td></td>
<td>- Mathematical ability</td>
</tr>
<tr>
<td></td>
<td>- Dyspraxia</td>
</tr>
</tbody>
</table>

**Table 1:** An overview of the cognitive effects of damage to different regions of the brain commonly compromised by FASD (Blackburn 2009 from Kellerman 2008, Blaschke et al 2009, Mukherjee 2009)

How does Foetal Alcohol Spectrum Disorders Impact on Child Development?

Characteristics of FASD will change over time and children’s developmental age will differ from their chronological age, as students with FASD will follow an asynchronous developmental pathway. Generally, however, the following characteristics may be observed:

**Indicators and Characteristics often seen in Primary School Aged Children**

- Attention deficits
- Hyperactivity
- Language difficulties (delayed development or difficulties with expressive and/or receptive language)
- Learning difficulties
• Difficulties with short term memory
• Poor impulse control (often seen as lying, stealing or defiant acts.)
• Small stature
• Social communication difficulties (may include being overly friendly with strangers and peers, immaturity, being easily influenced and difficulty in making choices).

**Indicators and Characteristics often seen in Adolescents and Young Adults**

• Difficulties with abstract reasoning
• Difficulty in understanding cause and effect/anticipating consequences
• Lack of appropriate academic achievement
• Low self-esteem
• Memory impairments
• Pronounced impulsiveness (often seen as lying, stealing or defiant acts.)
• Poor Judgment
• Hyperactivity/inattention
• Ego centric behaviour leading to isolation from peers
• Immaturity in social and emotional development
• Inappropriate sexual behaviour (Streissguth and Kanter 1997)

(For younger students, please refer to the Primary Framework).

The developmental profile of the child with FASD is variable, and the severity of presentation is not necessarily indicative of the severity of impairment (Stratton et al., 1996). Some children will not present any obvious characteristics of FASD; their symptoms will be purely behavioural. It is important that teachers are aware of the true effects of the hidden impairments, so they can recognise and accommodate children’s learning needs.

Children with FASD may score within normal limits on measures of IQ, appear physically mature, and give the appearance of functioning at a level consistent with their chronological age. Their expressive language may be in advance of their actual age, and their reading skills may be chronologically appropriate. However, the academic abilities of individuals with FASD are below their IQ level; their living skills, communication skills and adaptive behaviour levels are even further below IQ levels; and in areas such as social skills and emotional maturity, they may be performing at half of their developmental age (Streissguth et al., 1996).

**How does Foetal Alcohol Spectrum Disorders Impact on Teaching and Learning?**

Students with FASD will require informed, empathetic, reflective practitioners who are prepared to personalise learning in order to provide a practical, multi-sensory approach to teaching with opportunities for 1:1 support, small group work and extension activities, which allow students to consolidate and generalise their learning experiences in readiness for living experiences.
The Guiding Principles to Supporting a Student with FASD, together with the Teaching and Learning Strategies contained in this Framework provide suggestions for inclusion linked to the transdisciplinary outcomes around health, wellbeing, fulfilment, and contributing to the community.

These approaches are evidence-based. They have been suggested and used by teachers and support staff working in mainstream and special schools in the UK to support students with FASD. Not every child on the spectrum will experience the same difficulties or have the same strengths. Strategies mentioned in the frameworks, therefore, are starting points and may not be effective for every child. A comprehensive assessment of each child on the spectrum will be necessary to determine their exact needs.

Some strategies may appear over simplistic. It is important to remember that students with FASD will need to be taught skills which other students will learn quickly by observation and peer interaction.

A number of strategies have been repeated in more than one area of the framework. This is because teachers have found them useful for more than one aspect of learning.

It is expected that teachers and support staff will add to and adapt these strategies so that a rich pedagogy based on sensitive teaching and reflective practice will result.

How can Schools Work in Partnership with Families?

Parents and carers are a child’s first and most enduring educators and their role in a student’s educational journey should be valued. For students with FASD the family structure may consist of Foster or Adoptive parents as well as, or instead of biological parents and sensitivity about possible attachment difficulties is required. If the student is living with biological parents, sensitivity and understanding about how parents may be feeling about their child’s disability is paramount. Students with FASD will often present with a different set of needs in school than at home and parents/carers may have many concerns about how their child will manage through the school day.

These concerns should always be taken seriously as it is important that parents/carers feel that they have been listened to and their concerns addressed. It is important that students with FASD receive consistency of approach and language in both home and school setting as this will help them to make sense of the world and simplify the number of things they need to remember.
Transition from Primary to Secondary education can be particularly difficult for students with FASD and needs to be carefully managed, to ensure that communication is efficient and services to families do not become disrupted. A full assessment of the students needs should be undertaken at this time. For teenagers, issues around emotions, friendships and sexual behaviour, independence and achievement can compound their difficulties. A lack of understanding of the students particular learning needs can lead to unrealistic expectations. Without sensitive support and communication between primary and secondary teachers and families, students may experience behavioural, cognitive, and psychological secondary disabilities, for example, depression, self harm, loneliness and low self esteem, leading to disrupted schooling and trouble with the law. In addition, this is a particularly worrying time for families and they will need additional support from schools and supporting services to ensure a smooth transition.

What are the Implications of Adolescence for a Student with FASD?

Many adolescents experience confusion over a flood of unfamiliar feelings and a desire for increased independence and privacy. For students with FASD the journey through physical and emotional changes has additional implications for support as demonstrated by the table overleaf.

Students will need careful guidance through physical and emotional changes as well as supervised peer related discussions and 1:1 teaching opportunities regarding appropriate interactions with others and choosing appropriate partners, to assist with healthy development in this area. This should always be managed in close liaison with parents and carers to ensure that appropriate discussions can continue in the home environment.

Inappropriate sexual behaviour is a reported feature of FASD and this can become particularly problematic during adolescence. Impulsivity, naivety, immaturity and lack of understanding can lead students with FASD into trouble with the law if this area of learning need is not carefully managed. Sex education lessons will need to allow extra time for simple explanations and individual work to ensure understanding and reinforce basic rules regarding appropriate interactions with others.
### Typical Adolescent Development

<table>
<thead>
<tr>
<th>Physical and emotional (hormonal) changes</th>
<th>Physical and emotional changes which may be more confusing for a student with FASD to interpret.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wishes, hopes, dreams, fantasies</td>
<td>Wishes, hopes, dreams, fantasies may be unrealistic, for example involve dating a movie star, living in an extremely luxurious and expense house with no means of affording this style of living. The student may also experience a difficulty in separating fantasy and reality.</td>
</tr>
<tr>
<td>Cognitive changes: increase in abstract reasoning and judgement</td>
<td>Abstract reasoning and judgement may be impaired or develop much later.</td>
</tr>
<tr>
<td>Interest in teenage activities such as dating, discos, etc.</td>
<td>Student may desire these activities but lack peer social group to access them appropriately. Students may misinterpret the signals from opposite members of sex such as a wink or a smile. It may not be realistic to expect a student with FASD to understand that unprotected sex may or may not end in pregnancy or disease or that there is a time delay between intercourse, pregnancy and the arrival of a baby.</td>
</tr>
<tr>
<td>Increasing independence</td>
<td>Student may need the constant supervision necessary for a younger child, whilst experiencing a desire for increased independence.</td>
</tr>
</tbody>
</table>

### Table 2: Adolescent Development

Adapted from Sexually related changes in adolescence for those with developmental disabilities (Levine, 2000) in Kleinfeld, Morse and Westcott.

### What kind of support will the student need in preparation for leaving full time education?

Students with FASD will need extra support to identify appropriate and realistic work opportunities, career paths and further education placements. Students with FASD have strengths in practical areas, such as arts and gardening, and follow successful career paths in these roles. The focus for students at this time would ideally be in ensuring that key life skills, money handling experience and social support are in place.

In addition, this is a time when students with disabilities will transfer to the provision of adult services for health and social care and the family will need sensitive support to ensure that communication between school, services and the family unit is maintained at an appropriate level. In addition, as independent living may not be possible for some students, assistance with and advice for supported living may be necessary. To provide optimum support for families at this time, it is recommended that the following factors be in place:
- Provision of a key worker to co-ordinate and liaise with multi-agency services.
- A Person Centred Planning approach which takes account of the students’ views.
- Information sharing and effective communication between parents, school and supporting services about the student’s needs, preferences, routines, communication style.
- Training for staff in the chosen adult provision about supporting an individual with FASD.

An adult provision questionnaire is provided on at the end of this Framework, which can be used as a resource to assist parents/carers with the choice of suitable adult provision/supported living.

A simple checklist of some of the important aspects of including a child with FASD in the classroom is provided at the end of this Framework. This list is not exhaustive but should provide a starting point for teachers and support staff for inclusion.
## GUIDING PRINCIPLES TO SUPPORTING STUDENTS WITH FOETAL ALCOHOL SPECTRUM DISORDERS (FASD)

### Approach
Remember that students with FASD will be developmentally younger than their chronological age, particularly in the area of social and emotional skills.

Adopt a holistic approach which builds on the student’s sensory strengths.

Provide sequential sensory experiences (visual, kinaesthetic or auditory) and ensure a range of sensory opportunities throughout the lesson so that the student receives a multi-sensory experience.

Demonstrate rather than describe new techniques, and be prepared to repeat demonstrations, instructions, rules and concepts often.

Prepare students for new concepts by providing them with any new vocabulary beforehand to practise and learn.

Provide opportunities for small group and 1:1 work where possible and construct a personalised learning plan based on the student’s strengths and interests.

### Communication With Families
Ensure effective communication with parents and carers to reduce anxiety and develop an ethos of partnership.

Consistent language and approaches used and at home school will provide security and predictability for students who are easily overwhelmed by change and disruption.

### Environment
Ensure that the environment is free from distractions as far as possible. This includes distraction from noise, smell, tactile and visual distractions.

Constant supervision may be necessary to keep children who are developmentally younger safe from harm.

### Routine and Structure
Ensure routine is communicated to the student to reduce anxiety and enable them to organise themselves as independently as possible.

Changes to routine should be communicated to the student soon as possible and the student supported through them.

Structure will help the student with FASD make sense of their environment. Provide frequent breaks throughout a lesson to give the student time to refocus. It may help if they can do something physical for a few minutes between activities.

### Simplicity
Ensure that instructions, directions and tasks are broken down into short achievable, easily understood steps and delivered at a level which is developmentally appropriate to the student.

Be realistic about expectations.

### Understanding
Ensure that the student has understood instructions and directions. Say their name before giving instructions and directions.

Ask them to repeat what you’ve said them back to you in their own words.

Ensure that language used is simple, positive, concrete and free from jargon, sarcasm or idioms.

Provide visual aids if necessary as students may not always respond to auditory input alone.

Be specific when giving directions and provide step by step instruction.
# Health and wellbeing

Physically Healthy - Mentally and emotional Healthy - Sexually Healthy - Healthy Lifestyles – Choose not to take illegal drugs

## Barrier to Learning

<table>
<thead>
<tr>
<th>Food/Diet Issues:</th>
<th>Suggested Teaching and Learning Strategies</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Small body build.</td>
<td>• Provide access to appropriate social experiences for leisure/eating activities during Physical Education and lunchtime.</td>
</tr>
<tr>
<td>• Poor appetite/ inconsistent eating pattern/food intolerances (can lead to poor self perception).</td>
<td>• Encourage appropriate understanding of ‘self’ through discussion time activities.</td>
</tr>
<tr>
<td>• Lack of understanding about the importance of healthy eating.</td>
<td>• Increase understanding amongst staff of the range of difficulties the student experiences.</td>
</tr>
<tr>
<td>• Reduced dietary choices/inability to eat sufficient quantities of food to maintain energy levels.</td>
<td>• Provide visual displays on food groups and healthy eating.</td>
</tr>
<tr>
<td></td>
<td>• Promote healthy eating options at snack times and break times.</td>
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<tr>
<td></td>
<td>• Provide opportunities for small group work planned around diet and healthy eating. This provides the opportunity for the student to ask questions that they may not be confident enough to ask in a large group situation.</td>
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<tr>
<td></td>
<td>• Provide opportunities for practical food technology lessons.</td>
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<td></td>
<td>• Set small achievable goals to encourage eating meals and trying</td>
</tr>
</tbody>
</table>
| Medical/digestion issues and personal care needs. | Encourage medical, personal care staff, lunch time staff and teaching staff to work together on site to support in enabling student to manage issues as unobtrusively as possible in order to build student independence. This can result in improved relationships for the student with staff and peers.
  
  Ensure thorough communication with parents about diagnosis/medical needs and cascade to all staff within school.
  
  Ensure that members of staff located in the chosen Further or Higher Education setting are fully briefed on the student’s needs.
  
  Encourage speed in going to and returning from the medical room to minimise missed lesson time.
  
  Share news and inform the student what has been missed when they return to the classroom in order reduce anxiety about missed lesson time. |
<table>
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<tbody>
<tr>
<td>Lack of understanding about personal hygiene.</td>
<td>Provide specific support around personal hygiene issues in individual and group work as students with FASD may need extrinsic motivation and frequent and constant reminders to remember hygiene routines.</td>
</tr>
</tbody>
</table>

new foods. Encourage the student to try one new food each week.

- Reduce the amount of food provided on a plate at any one time. Encourage the student to try small amounts of new foods and provide a clear target for the amount he/she should try to eat.
  
- Provide choices in meals.
  
- Share knowledge of the students eating and dietary difficulties with all staff within the school.
  
- Encourage activity such as dancing outside of Physical Education lessons to improve activity and energy levels.
  
- Ensure that members of staff located in the chosen Further or Higher Education/work placement setting are fully briefed on the student’s needs.
<table>
<thead>
<tr>
<th>Inappropriate sexual behaviour.</th>
<th>Inappropriate sexual behaviour.</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Provide the opportunity for peer discussions relating to personal hygiene.</td>
<td>• Provide low impact 1:1 supervision where necessary and if possible a separate changing room for the student such as an office. Ensure that the student is not left in a position where they are able to take advantage of other students, visitors or members of staff. This will reduce the risk of the student acting on impulse, make them more aware of how their behaviour impacts on others and improve peer relationships.</td>
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<tr>
<td></td>
<td>• Use role play and social scripts to talk through social scenarios and demonstrate appropriate and inappropriate interactions with others.</td>
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<tr>
<td></td>
<td>• Allow extra time for discussions to ensure understanding of basic information. A propensity for a student to expose themselves or touch others may simply be an attempt to engage others on an emotional level without understanding how others may feel or react.</td>
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<tr>
<td></td>
<td>• Sex education needs to highlight concrete rules which are easily understood and do not need to be generalised. For example, unprotected sex is <em>always</em> unsafe sex, condom use is <em>never</em> optional and masturbation must <em>always</em> take place in private (ensuring an understanding of what private means). Consequences must be clearly and simply explained, using role play, social scripts and repetition, and consistently applied.</td>
</tr>
<tr>
<td></td>
<td>• It may not be realistic to expect a student with FASD to understand that unprotected sex may <em>or</em> may not end in pregnancy or disease, or that there is a time delay between intercourse, pregnancy and the arrival of a baby. The delivery of these concepts may require careful planning, liaison with parents and carers, repetition and extra time for discussion and explanation.</td>
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<td></td>
<td>• Engage external services to look for a community peer to support the student through social scenarios and positive role models.</td>
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<td></td>
<td>• Consider inviting parents to sex education lessons so that discussions in the classroom can be extended at home using the</td>
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</table>
same concepts and language and to reduce any concerns parents may have about the nature of sex education lessons for students with learning difficulties.

- Monitor and record the incidence (including time of day, type of environment, particular room, other students involved, preceding incidents) of inappropriate interactions to determine any patterns and possible reasons, e.g. stress, comfort.

- Consider how the student can participate in external work experience, voluntary work or take on prefect responsibilities within school and what kind of support they will need for this.
## Stay Safe

Safe from maltreatment, neglect, violence and sexual exploitation – Safe from accidental injury and death – Safe from bullying and discrimination – Safe from crime and anti-social behaviour in and out of school – Have security, stability and are cared for

### Barrier to Learning

<table>
<thead>
<tr>
<th>Difficulty in understanding of personal/social dangers/danger of actions to self and other students.</th>
<th>Suggested Teaching and Learning Strategies</th>
</tr>
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<tbody>
<tr>
<td></td>
<td>• Conduct a safety walk around the school buildings and grounds with the student in order to highlight dangers around school.</td>
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<td></td>
<td>• Provide a safe environment and ensure adequate adult support.</td>
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<td>• Provide safety notices and ensure appropriate explanation at a level of understanding appropriate to the student.</td>
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<td></td>
<td>• Liaise with parents/agencies/pupil to identify danger issues. Agencies such as Barnardo’s can work alongside Learning Mentors in small groups with students, providing a safe environment for students to express concerns and ask questions confidently.</td>
</tr>
<tr>
<td></td>
<td>• Ensure effective communication with parents and cascade information from parents to all staff.</td>
</tr>
<tr>
<td>Inappropriate interactions with other vulnerable students.</td>
<td>• See section in Be Healthy on Inappropriate Sexual Behaviour</td>
</tr>
<tr>
<td></td>
<td>• The provision of 1:1 adult supervision 100% of the time may be necessary for some students.</td>
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<tr>
<td></td>
<td>• Ensure supervision is low impact and subtle.</td>
</tr>
</tbody>
</table>
| Vulnerability due to trusting nature, lack of stranger danger and engaging with unsuitable peers. | • Address stranger danger and personal safety issues during circle time/drama work/PHSE and citizenship work.  
• Model keeping safe and explain the reasons for keeping safe.  
• Explain steps for keeping safe with constant and frequent reminders and reinforcement.  
• The provision of a very safe learning environment can mean that there is little need for students to be wary of strangers. Provide opportunities to meet strangers through organised visits and visitors to the school in order to build awareness of risks whilst working on strategies to avoid or remove them.  
• Discuss with the student, individually and in small group work, the many reasons why people bully others, including feelings of unhappiness, loneliness and frustration, illusions of power, and attempts to make themselves feel bigger and stronger. Use concrete examples and simple language. |
|---|---|
| Becoming distressed. | • Provide a quiet time area where the student can go to calm down. Provide earphones, eye masks, lavender and calming music.  
• Ensure that this is viewed by the student as a positive aid for them to regulate their own emotions rather than being viewed as a punishment in order to build confidence and self esteem.  
• Record the occurrence of incidents in order to observe possible triggers which may be causing the distress. Monitor to see if this occurs at particular times, with particular peers or members of staff, etc, in order to reduce occurrences. |
| Inflexibility over changes to timetables/schedules. | • Where changes to timetables and schedules are necessary ensure that the student is informed as soon as possible and given an appropriate explanation. This will help to reduce anxiety and disruptive behaviour.  
• Provide adult support to prepare the student for and guide them through changes to timetables and arrangements. |
| Impulsive behaviour /no Sense of danger regarding self or others. | • Provide constant supervision and appropriate adult ratios in practical lessons and laboratory situations (it may be necessary for 2:1 adult supervision during some practical lessons to support unusual levels of impulsivity/hyperactivity).

• Provide specific teaching of routines and safety rules.

• Be prepared to repeat instructions/routines/rules as often as necessary to ensure understanding. This will help to increase confidence and motivation.

• Provide a quiet space to discuss sensitive issues with the student. |
### Barrier to Learning

#### Communication: Level of Understanding.

<table>
<thead>
<tr>
<th>Suggested Teaching and Learning Strategies</th>
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<tbody>
<tr>
<td>• Provide 1:1 adult support, giving independence when appropriate.</td>
</tr>
<tr>
<td>• Provide opportunities for small group work. This will provide a secure environment in which the student may feel more confident to ask and respond to questions than they would in large group situations.</td>
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<td>• Provide Visual Aids to reinforce instructions and tasks.</td>
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<tr>
<td>• Make visual timetables concrete by including photographs of the student doing activities rather than symbols or drawings.</td>
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<tr>
<td>• Break instructions into chunks. Keep instructions as short as possible, provide them one at a time and reinforce with visual cues as prompts.</td>
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<tr>
<td>• Break tasks into small achievable steps starting with what the student can already do to build self esteem.</td>
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<tr>
<td>• Provide multi-sensory opportunities with natural gesture and consistency of language throughout the school. For students with more complex communication needs formal signing may be...</td>
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<tr>
<td>Communication: Literacy Skills.</td>
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</table>
- Allow opportunities to tell or record stories pictorially as some students may not be ready for lengthy writing.

- Consider other methods of recording progress such as mind maps, diagrams, charts, writing frames, cameras, and video.

- Mind maps can be used to help organise thoughts and tasks and help to embed understanding of subjects and tasks.

- Writing frames can be used for written homework, providing clear structure and concise organisation of what to put on the page and where, making tasks more manageable.

- Consider colour coding words for sentence construction. For example all nouns could be red, all verbs yellow and adjectives green (taking into account the students own colour preferences). This works well when used with writing frames.

- Provide a laptop and/or scribe if necessary for written work. This can help to improve enjoyment of a task and improve concentration and engagement with a task.

- Use picture dictionaries where possible to aid vocabulary development.

- Provide audiotapes or CDs of textbooks, literature and social stories.

<table>
<thead>
<tr>
<th>Difficulty with abstract concepts (including maths).</th>
<th>General</th>
</tr>
</thead>
<tbody>
<tr>
<td>- Demonstrate a concept, show rather than tell, and be prepared to repeat the demonstration/instruction.</td>
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<tr>
<td>- Expect learning to take place at a slower pace, make teaching interactive and allow the student to talk through mathematical processes and problems as this may help with memory.</td>
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<tr>
<td>- Provide concrete examples of abstract concepts such as number lines, abacus for understanding place value and real objects for</td>
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</table>
counting in sequence and establishing the concept of what numbers stand for.

- Use vertical number lines instead of horizontal number lines so that students can identify that adding results in numbers going up and subtracting results in numbers going down in a visual way.

- Plan games activities involving right and left instructions.

- Plan physical activities involving mathematical concepts such as number, positional language, colour, shape as movement can aid memory retention.

- Use ICT as a visual representation of number rules and mathematical concepts. Computer based learning programmes may work well because they are repetitive, visual and provide immediate feedback coupled with a hands-on learning experience.

- Teach cause and effect with the use of three dimensional tactile resources.

- Use a consistent language for all concepts and in all classrooms/lessons; for example do not say nought one day, and zero the next.

- Too many maths problems/questions on one page may overwhelm the student. One or two problems/questions on one page with plenty of white space in between are more manageable.

- Include the students name in word problems.

- Produce mathematical process cards providing examples of mathematical processes broken down in a step by step process for the child to refer to as a reminder.

- Avoid mixing addition and subtraction, multiplication and division problems on the same page. Ensure that the operation symbol is in large and bold type so that it is clear what the student is expected to do.
- Questions and problems involving a story which needs decoding is an extra task, which may be overwhelming. Allow extra time and provide adult support.

- Graph or lined paper can help students to line mathematical problems up more easily than plain paper.

- Allow the use of calculators if necessary.

- Use art projects to make abstract concepts more concrete. Use coloured sand to teach the student about volume. Give the student a clear plastic cup or a clean glass jar and allow him/her to fill in the item with different colours of sand.

- When teaching the student about temperature, use a blanket as an example of cold and hot. The student will understand that he/she will put on a blanket when they are cold and will take the blanket off when warm.

Money/Time
- Use real money and clock faces as they are more concrete and this will allow students to move the hands on the clock.

- Consider the use of a linear clock if the student finds conventional clock faces difficult.

- Use objects in the classroom and around the school such as calendars, clocks, watches to highlight numbers and number patterns to encourage the ability to generalise.

- Plan role play sessions involving time and money with shop, restaurant and shopping scenarios. Use real objects so that students do not have to generalise.

- Use sand timers, egg timers, growing plants and daily calendars to help students visualise the passing of time.

- Use timers to help students recognise how long they have to complete a task.
### Number Sense

- Relate numbers to meaningful concrete objects to enable students to view numbers as values rather than labels. For example, there are two wheels on a bicycle, three wheels on a tricycle, and four wheels on a car.

- Create a large number line across the classroom which students can physically move across.

- Help students to recognise that many things cannot be measured precisely by providing practice with estimation in a range of situations.

- Provide a range of materials that involve number and number representations such as dice, dominoes, playing cards, coins, clocks, and rulers.

- Look for ways to incorporate students' own interests and strengths into number work in order to personalise their learning. For example, football teams provide countless opportunities for number work.

### Sensory processing difficulties.

(Relates to difficulty in processing movement input, such as sensory seeking (hyperactivity), distractibility, irritability, and inattention.)

- Consider asking an Occupational Therapist to undertake a sensory profile if the student seems switched off frequently, or easily overwhelmed by texture, noise, light, smell, movement, sound, temperature, crowded places or too much dialogue, as they may be hypo sensitive or hyper sensitive.

- Ensure that all staff in contact with the student are aware of the issues relating sensory processing difficulties and the impact on learning.

- Consider the classroom and school environment in terms of noise, light, sound, ease of access. Particularly problematic are fluorescent lights, scraping chairs, air conditioning units, school bells, ticking clocks, echo in changing rooms and toilets, chemicals and Bunsen burners in practical lessons, textiles in technology lessons, some food items, and perfume aromas.

- Place carpet or tennis balls on the legs of tables and chairs to eliminate noise when other students move.
| Inattention/distractibility/ hyperactivity/irritability. | Seat the student away from distractions such as windows, doors and the movement of other students as far as possible.  
Provide a calmer environment and opportunity to visit this when the student becomes overwhelmed. Provide earphones, eye masks, lavender and calming music. If appropriate, provide earphones to use in this classroom.  
Consider whether the student has sensory processing difficulties (see above).  
Provide a stress ball or other item to encourage focus.  
Seat the student at the front of the room so that they can maintain eye contact with the teacher and receive both auditory and visual input.  
Keep tasks short and achievable and break tasks up with physical activity to expend energy and refocus attention.  
Build up the time that the child is expected to sustain attention gradually. Make a visual chart showing progress to share with them so that they can see their own achievement in terms of sustained attention.  
Use percussion instructions for children to create rhythms and to practise following instructions to play and copy patterns. Students will need to listen and sustain attention to hear patterns.  
Music therapy sessions can provide a safe space for the student to explore and express emotions and feelings, reducing anxiety and hyperactivity. This can also improve listening and attention skills.  
Consider whether diet is a contributing factor or whether there are any underlying undetected health problems.  
Frame the students working area (including seat and desk) with masking tape to keep their attention focussed on their work space and remember their personal space. |
<table>
<thead>
<tr>
<th>Difficulty with self image:</th>
<th>• Provide plenty of positive feedback and be positive about the student’s efforts in order to build up student self esteem and motivation.</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Egocentric behaviour.</td>
<td>• Ensure peer assessment is conducted in a positive way.</td>
</tr>
<tr>
<td>• Overly competitive.</td>
<td>• Ensure praise is immediate and given in a consistent way.</td>
</tr>
<tr>
<td>• Poor self esteem.</td>
<td>• Provide frequent and ongoing clarification of expected outcomes.</td>
</tr>
<tr>
<td>• Inability to set realistic expectations for self in respect of tasks or outcomes</td>
<td>• Provide therapies which are carefully planned around curriculum strengths and weaknesses (e.g. music therapy).</td>
</tr>
<tr>
<td>Memory difficulties/ lack of organisation skills/not following rules.</td>
<td></td>
</tr>
</tbody>
</table>
- Provide concrete examples of abstract concepts to aid retention.

- Provide visual timetables in classrooms and students planners as a memory aid.

- Visual timetables would ideally use photographs of the student as a concrete representation of what is required, what’s happening next.

- Check the students understanding frequently including checking understanding about homework.

- Communicate with parents/carers about homework through a home/school diary or emails.

- When asking a child to repeat an instruction you have given, ask them to repeat it in their own words to ensure they have processed and understood the information.

- Use appropriate reward systems which reward the student for their individual achievement and which motivate them personally.

**Environment**

- Ensure that the learning environment is uncluttered and reduce as many distractions as possible (see section on Sensory Processing).

- Seat the student at the back of room where they can see everyone and leave the room quickly if necessary.

- Withdraw the student to a calm area if the classroom is noisy and busy.

- Consider colour/shape coding items which the student needs to access frequently, e.g. red triangles for maths books, yellow circles for literacy books.

- Seat the student in the same place consistently, ideally where the teacher can easily see the student (vice versa) and maintain eye contact.
## Make a Positive Contribution

Engage in decision making and support the community and environment – Engage in law abiding and positive behaviour in and out of school – Develop positive relationships and choose not to bully and discriminate – Develop self confidence and successfully deal with significant life changes/challenges – Develop enterprising behaviour

<table>
<thead>
<tr>
<th>Barrier to Learning</th>
<th>Suggested Teaching and Learning Strategies</th>
</tr>
</thead>
</table>
| Difficulty in forming and maintaining relationships with peers and staff. | • Use social stories and scripts to explain to students how to behave in different social situations. Provide a script for each situation as students may not be able to generalise from one situation to another. Repetition of stories and scripts can help to embed them in the student’s memory, improving confidence, engagement and understanding.  
  
• Provide visual prompts showing required behaviour preferably using photographs of the student rather than pictures or symbols.  
  
• Use puppets, role play and drama to explore feelings and attitudes. This can help in improving peer relationships through language development and conversation.  
  
• Provide opportunities to work 1:1 with an adult and then with a peer.  
  
• For paired activities, pair the student with other students who are good role models.  
  
• Plan for turn taking games and circle games to encourage |
appropriate social interaction.

- For students who interrupt or find it hard to know when it is their turn, provide a concrete object such as a small ball as a holding item to indicate when it is appropriate to talk or have a go i.e. when the ball is in the student's hand it is their turn.

- Provide peer groups for break times and lunch times to facilitate friendships.

- Plan student groups carefully.

- Carefully plan therapies around curriculum strengths and weaknesses.

- Provide the opportunity for supervised social situations with good role models in unstructured free time.

- Provide a key worker with whom the student can discuss social and emotional difficulties related to home or school life (this could be a Teaching Assistant, Learning Mentor or Teacher) who is well known to the student and with whom the student is able to bond.

- Provide a positive learning environment with opportunities to engage with peers and adults, and support engagement with praise and encouragement.

- Discuss with the student their general state of emotional well being at the beginning of each day using a scale from 1 – 5, and record this in their planner. This can be used as a communication aid amongst support staff about the student’s mood and ability to cope with the coming day. This may help to reduce anxiety throughout the day.

- Discuss with the student, individually and in small group work, the many reasons why people bully others, including feelings of unhappiness, loneliness and frustration, illusions of power, and attempts to make themselves feel bigger and stronger. Use concrete examples and simple language.
| Over exuberance/changeable emotions and temper. | • Balance opportunities for student to contribute and share ideas of work and participate in performances, then provide sufficient praise and encouragement to support them and build confidence.  

• Provide advice on appropriate behaviour and be prepared to repeat frequently.  

• Provide 1:1 adult support and time out in a small, quiet room if needed. Provide headphones, eye masks, lavender and calm music. Ensure that this is viewed as a positive experience in order for the student to regulate their own emotions and provide independence rather than being viewed as punishment.  

• Consider whether the child has Sensory Processing difficulties (see section on Enjoy and Achieve). |
|---|---|
| Becoming overwhelmed during special events. | • Use role play, social stories and scripts and photographs to prepare students for special events, including trips.  

• Ensure parents/carers have advance notice of events so that they may prepare students adequately.  

• Some events may need to be discussed with parents before informing students, in order that parents may decide whether it is appropriate for their child to be included. This will avoid any unnecessary disappointment for the student and assist with parental partnership.  

• For trips make a book with photographs and pictures depicting what to expect during the trip. Include photos of the journey and what to expect on arrival. Share this with parents/carers.  

• Carefully plan the student’s transition to the chosen Further or Higher Education/work placement setting, ensuring liaison with parents/carers and other professionals involved in the students support plan.  

• Provide the student with a photographic record of their new school. Include members of staff, learning environments, new uniform, journey details, etc so that they can familiarise themselves with the new setting well before they arrive. |
## Achieve Economic Well Being

Engage in further education, employment or training on leaving school – Ready for employment - Live in decent homes and sustainable communities – Access to transport/material goods – Live in households free from low income

<table>
<thead>
<tr>
<th>Barrier to Learning</th>
<th>Suggested Teaching and Learning Strategies</th>
</tr>
</thead>
<tbody>
<tr>
<td>Limited understanding of the value of money.</td>
<td>• Provide plenty of concrete opportunities for handling money within mathematics, reinforced by community experiences of money handling such as visiting shops to buy specific items.</td>
</tr>
<tr>
<td></td>
<td>• Provide a personalised learning pathway which builds on the student’s strengths and interests to facilitate employment opportunities and ensure that key life skills are in place.</td>
</tr>
<tr>
<td></td>
<td>• See section on abstract concepts in Enjoy and Achieve.</td>
</tr>
<tr>
<td>Unrealistic expectations/awareness of self.</td>
<td>• Work on self awareness and life skills through Citizenship.</td>
</tr>
<tr>
<td></td>
<td>• Provide opportunities for participation in Enterprise Activities such as fund raising.</td>
</tr>
<tr>
<td></td>
<td>• Provide opportunities for participation in decision making activities supported by adults.</td>
</tr>
<tr>
<td>Lack of life skills, particularly around personal safety and forming appropriate relationships.</td>
<td>• Provide gentle guidance over appropriate behaviour.</td>
</tr>
<tr>
<td></td>
<td>• Provide life skill experiences through PHSE, Physical Education and Social Clubs and make time to listen to students concerns.</td>
</tr>
</tbody>
</table>
| Immaturity and lack of social understanding about employment opportunities and job roles. | • Provide adult modelling regarding appropriate responses/behaviour.  
• Facilitate regular discussions about personal safety and appropriate interactions with peer groups.  
• Teach life skills specifically and frequently. Provide practical opportunities for shopping, cooking, car maintenance, cleaning and other domestic chores.  
• Encourage independence throughout school by allowing students to personalise their own timetable with the use of a highlighter, encourage them to organise their own snacks and water bottles for breaks, etc.  
• Ensure that the Careers Service and Connexions together with parents/careers and voluntary organisations who support young people with disabilities are involved in the student’s transition plan.  
• Provide opportunities for visits from appropriate professions, e.g. ‘People Who Help Us’.  
• Provide opportunities for visits in the community, and work placement opportunities, ensuring appropriate and informed adult support is in place to meet the student’s needs.  
• Facilitate discussions using social stories and scripts about employment, further and higher education and career opportunities.  
• Provide opportunities for the student to take on special roles within school where appropriate, such as Prefect or ‘Special Helper’. Give the student small tasks to perform throughout the day such as taking the register to reception.  
• Arrange visits to career fairs and exhibitions to demonstrate the range of work opportunities available.  
• Arrange links with colleges of further education and higher |
education establishments to facilitate visits and information events.

- Encourage the student to participate in fundraising for specific schools goals, for example participating in the Christmas Fair to raise money for a school trip.

- Provide opportunities for students to make items to be sold at Fetes and Fairs.
<table>
<thead>
<tr>
<th><strong>Leisure and social needs</strong></th>
<th><strong>Communication policy:</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Age mix of other residents?</td>
<td>Most used means of communication on-site?</td>
</tr>
<tr>
<td>Ability mix of other residents?</td>
<td>What alternative systems are used</td>
</tr>
<tr>
<td>Levels of challenging behaviours of other residents?</td>
<td>signing/symbols/other systems</td>
</tr>
<tr>
<td>Activities available on-site – individual and group activities?</td>
<td>Level of skills of staff?</td>
</tr>
<tr>
<td>Regular activities off-site, and what?</td>
<td>do staff use young person’s own communication method as a matter of course?</td>
</tr>
<tr>
<td>Links with community – clubs and individuals?</td>
<td><strong>Presence of IT support:</strong></td>
</tr>
<tr>
<td>Visits and trips made, and what?</td>
<td>What is available on-site?</td>
</tr>
<tr>
<td>Availability of transport?</td>
<td>How skilled are staff?</td>
</tr>
<tr>
<td>Holidays?</td>
<td>How interested are staff?</td>
</tr>
<tr>
<td>Show list of young person’s interests:</td>
<td>What access to it do residents have?</td>
</tr>
<tr>
<td>Is there the support for the young person to continue with these?</td>
<td><strong>Employment and education/training</strong></td>
</tr>
<tr>
<td>Are there opportunities for him/her to develop new interests and hobbies?</td>
<td>Opportunities on-site?</td>
</tr>
<tr>
<td><strong>Links with family:</strong></td>
<td>Opportunities off-site?</td>
</tr>
<tr>
<td>Preferred level of parental contact?</td>
<td>College courses:</td>
</tr>
<tr>
<td>How are parents involved:</td>
<td>Variety and frequency</td>
</tr>
<tr>
<td>telephone calls/emails</td>
<td>What is the organisation’s attitude to education and training for residents?</td>
</tr>
<tr>
<td>reports</td>
<td><strong>Environment and physical accommodation:</strong></td>
</tr>
<tr>
<td>letters</td>
<td>Single room?</td>
</tr>
<tr>
<td>photos / pictures</td>
<td>Size – floor space / wall space / room for work table and arm chair / sufficient for cupboard and book-cases, etc. / bed size (? provided)?</td>
</tr>
<tr>
<td>parents’ group?</td>
<td>Level of provision / decoration?</td>
</tr>
<tr>
<td>Visitors – how are they dealt with?</td>
<td>What is provided by the resident (? own furniture)?</td>
</tr>
<tr>
<td><strong>Reviews:</strong></td>
<td>General environment?</td>
</tr>
<tr>
<td>Do they have more than the statutory annual one?</td>
<td>Move from high dependency to less high dependency possible?</td>
</tr>
<tr>
<td>How frequent are care plan reviews?</td>
<td><strong>Diet:</strong></td>
</tr>
<tr>
<td>Are reports issued before the meeting?</td>
<td>Meal options</td>
</tr>
<tr>
<td>Who attends?</td>
<td>non-meat</td>
</tr>
<tr>
<td>Who chairs it?</td>
<td>low fat / healthy</td>
</tr>
<tr>
<td>How can the young person participate, e.g. video / graphics / what did s/he and didn’t s/he like?</td>
<td>caffeine</td>
</tr>
<tr>
<td><strong>Medical:</strong></td>
<td>wine with meal?</td>
</tr>
<tr>
<td>Is there a GP to the establishment or do they have a choice?</td>
<td><strong>Input from professionals:</strong></td>
</tr>
<tr>
<td>Choice of partner within the GP practice?</td>
<td>Speech and language therapist?</td>
</tr>
<tr>
<td>Ditto with dentists?</td>
<td>Psychologist?</td>
</tr>
<tr>
<td>Specific health experience (in event of young person’s specific health needs)?</td>
<td>Occupational Therapist?</td>
</tr>
<tr>
<td>Arrangements to notify parents of ill health?</td>
<td>Physiotherapist?</td>
</tr>
<tr>
<td><strong>Personal possessions and identity</strong></td>
<td>Other?</td>
</tr>
<tr>
<td>What is done about this?</td>
<td><strong>Atmosphere, e.g:</strong></td>
</tr>
<tr>
<td><strong>Religious and cultural needs:</strong></td>
<td>Positive / negative?</td>
</tr>
<tr>
<td>Proximity to place of worship – on-site and off- site worship?</td>
<td>Care only / emphasis on achieving?</td>
</tr>
<tr>
<td>Relationship of establishment with place of worship?</td>
<td>Focused / vague?</td>
</tr>
<tr>
<td>Special celebrations?</td>
<td>Happy / miserable?</td>
</tr>
<tr>
<td>Active or busy / bored?</td>
<td>Clean and tidy / scruffy?</td>
</tr>
<tr>
<td>Peaceful / agitated?</td>
<td>Forward looking / stagnant?</td>
</tr>
</tbody>
</table>
Supporting Students with FASD - Checklist for inclusion

- Say the child’s name at the beginning of an instruction or sentence. Make sure you are facing the child so that they can see your facial expressions and gestures.

- Use simple, concrete and consistent language across the curriculum and throughout the school. Share language for educational concepts with parents/carers.

- Think about the language used in tests/exams and whether it matches what the student is familiar with.

- Give only one instruction at a time.

- Keep instructions short; use the minimum number of words.

- Say exactly what you want the child to do (e.g. instead of saying “Tidy up”, say “Put the scissors in the blue box”), and back this up with pictures if necessary.

- If you are interrupted whilst giving an instruction, go back to the beginning of your sentence.

  - Ensure the child has understood by asking them to repeat an instruction back to you in their own words.

  - Give the child time to think about what you have asked of them.

  - Use positive communication; instead of saying “Don’t run”, say “Walk”.

  - Use exaggerated facial expressions and gestures to give the child clues as to your meaning.

  - Reinforce auditory input with visual aids and provide students with a visual timetable.

- Break tasks into small steps and be realistic about expectations.

- Use visual prompts and concrete objects such as puppets for story telling for young children and number lines for mathematics.

- Show, don’t tell; demonstrate concepts so that students know exactly what is expected.
• Provide opportunities for discussion of new concepts before they introduced in the classroom and check understanding afterwards.

• Provide opportunities for new learning to be connected to existing knowledge.

• Communicate with parents/carers regularly by email/phone/home-school diary.

• Provide worksheets which have plenty of white space and do not mix mathematical concepts and operations.

• Plan around the student’s strengths and interests and provide immediate, frequent praise for each achievement.

• Be flexible about how achievement is recorded, consider video, photographic evidence and provide a scribe where necessary for technical lessons such as science where the student may be overwhelmed by sensory stimulation.

• Plan multi-sensory experiences based around the students sensory strengths and needs, including activities involving movement.
Books/Publications

Blaschke, K., Mataverne, M., Struck, J., (2009) Fetal Alcohol Spectrum Disorders Education Strategies, Working with Students with a Fetal Alcohol Spectrum Disorder in the Education System, Sandford School of Medicine, University of South Dakota.


Web:

National Organisation on Fetal Alcohol Syndrome: [www.nofas-uk.org]

FASAware: [www.fasaware.co.uk]

FASD Trust: [www.fasdtrust.co.uk]


ATT (Autistic Spectrum Disorder Transition Tookit) (suitable for students moving from Primary to Secondary education [http://www.autismtoolkit.com/whatis.htm]

Carolyn Blackburn, October 2010

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Published by: National Organisation on Fetal Alcohol Syndrome-UK: London
Undertaken to Date (October 2010):

- Specialist Schools and Academies Trust Complex Needs Road Shows - 141 Education Staff
- Staffordshire Pre-School Learning Alliance – 50 EYP
- Staffordshire Early Years service – 30 EYP
- Chester University – 100 Trainee Teachers
- Specialist Schools and Academies Trust SENCo Network – 10 Education Staff
- Royal Society of Medicine – 80 Multi-Disciplinary Workers
- Lancashire Local Authority - 27 Higher Level Teaching Assistants
- Riverside Special School - 30 multi-disciplinary staff
- St. Nicholas Special School - 30 multi-disciplinary staff
- Bradford Academy - 15 Higher Level Teaching Assistants
- Abbey Hill School and Technology College – 30 education staff
- University of Worcester – 30 teachers undertaking SENCo training
- Danecourt School Outreach Centre – September 2010
- Specialist School and Academies Trust Special Schools Network Autumn Conference – September 2010
- Rickards Lodge High School - October 2010

Forthcoming:

- University of Worcester SENCo Award Trainees – November 2010
- Specialist Schools and Academies Trust Complex Needs Conference – November 2010
- First European Conference on FASD - November 2010
- University of Worcester SEN conference – January 2010
- FASD Conference, CCL Consultants Ltd, Birmingham – February 2010
- Abbey Hill School and Technology College – May 2011

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