

**The exploration of social, emotional and behavioural
functioning of pupils with ASD of primary age in educational
settings and how this is managed.**

Volume 1 of 2

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Abstract

Due to higher levels of Autism Spectrum Disorder diagnosis within the primary age range, more teachers than previously are teaching pupils diagnosed with Autism Spectrum Disorder within their classrooms. The difficulties these pupils may face while at school are well documented and a range of strategies and approaches have been developed to support the needs arising from these difficulties. This thesis will explore the questions of what exact type of social, emotional and behavioural functioning do pupils with Autism Spectrum Disorder experience in their school settings? How are any difficulties experienced managed in primary classrooms? A total of forty two primary aged pupils were assessed through the use of two established surveys to explore the levels of social, emotional and behavioural functioning the pupils experience from three different perspectives – pupil, teacher and parent. Following on each pupil's teacher was interviewed to explore the contemporary situation in English primary schools regarding the ways in which support is offered and ways in which this support could be developed. Six case studies were undertaken through further interviews and observations to explore in a more individualised way the ways in which pupils and teachers feel the inclusion of pupils with Autism Spectrum Disorder through the management of their social, emotional and behavioural functioning is organised. Findings show the pupils have difficulties in the areas of panic disorder, major depression and separation anxiety and that parents believe their children to have more difficulties than the children themselves or their teachers. The case studies and interviews show that although teachers report pupils with Autism Spectrum Disorder are included socially and academically in their class, the ways in which their needs are currently being met highlighted a lack of formal training and strategies and approaches designed for pupils with Autism Spectrum Disorder. Teachers' report that further support from specialist staff would be most useful. This thesis concludes with the implications for future practice and policy (including more Autism Spectrum Disorder training for teachers and teaching assistants) and future research and study (including the impact of specialist staff in primary schools) within the area of managing social, emotional and behavioural functioning of pupils with Autism Spectrum Disorder in primary educational settings.

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Abbreviations

Acronym/ Abbreviation	Full Title
APA	American Psychiatric Association
ASC - ASD	Anxiety Scale for Children with Autism Spectrum Disorder
ASD	Autism Spectrum Disorder
CPD	Continuing Professional Development
CSPAR	Class Size and Pupil Adult Ratio
DfE	Department of Education
DISS	Deployment and Impact of Support Staff
DoH	Department of Health
DSM-4	Diagnostic and Statistical Manual of Mental Disorders, 4 th Edition
DSM-5	Diagnostic and Statistical Manual of Mental Disorders, 5 th Edition
EHC	Education Health and Care Plan
ESCS	The Early Social Communication Scales
ICD-10	International Statistical Classification of Diseases and Related Health Problems, 10 th Revision
ICD-11	International Statistical Classification of Diseases and Related Health Problems, 11 th Revision
ICF	The International Classification of Functioning
INCO	Inclusive Co-ordinator
IU	Intolerance of Uncertainty
IY-TCM	The Incredible Years Teacher Classroom Management Programme
LA	Local Authority
NAS	National Autistic Society
NICHD	The National Institute of Child Health and Human Development
NQT	Newly Qualified Teacher
OT	Occupational Therapist
PPA	Planning, preparation and assessment
PSA/1:1	Pupil Support Assistant/1:1
PSI	Personalised System of Instruction
PE	Physical Education lesson
RBQ	The Repetitive Behaviour Questionnaire
RCADS	The Revised Children's Anxiety and Depression Scale
SALT	Speech and Language Therapy
SCAS	Spence Children's Anxiety Scale
SCERTS	Social Communication, Emotional Regulation and Transactional Support
SDQ	The Strengths and Difficulties Questionnaire
SEBD	Social, Emotional and Behavioural Difficulties
SPA	Structured Play Assessment
SRE	Sex and Relationship Education
SEN	Special Educational Needs
SENCO	Special Educational Needs Co-ordinator

TA	Teaching Assistant
UK	United Kingdom
US	United States
WHO	The World Health Organisation

Chapter 1: Introduction

1.1: The general background to the study

The number of children with Autism Spectrum Disorder (ASD) has increased greatly in the past few decades. The frequency of ASD has increased from 1 in each 1000 individuals in 1980, to 1 in 150 in 2000 to 1 in an estimated 88 in 2008 in the United States (Davis, White and Ollendick 2014). Within the UK the frequency of ASD has also increased and it is believed to be far greater than previously recognised, now estimated to be 116.1 per 10,000 or 1.161 per 100 children (Baird, G. et al., (2006). This may be due to the higher rate of ASD or the higher rate of diagnosis. Whichever is the case there remains more pupils diagnosed with ASD in primary classrooms. The social, emotional and behavioural difficulties pupils with ASD face are well documented, Sigman and Ruskin, 1999, Zeman, Cassana, Perry-Parrish and Carisa, 2006. With the inclusion of many pupils with special educational needs in mainstream schools in England (DfE/DoH, 2014) these are difficulties class teachers are likely to encounter and have to support.

This research study aimed to investigate what are the social, emotional and behavioural functioning of primary aged children with ASD and how any difficulties they may experience in these areas are managed. This research study was planned with a view to improving the educational experience of primary aged children with ASD. Initially an overview of the social, emotional and behavioural functioning of ASD pupils took place. Social, emotional and behavioural difficulties (SEBD) is a well-established term used to describe children with difficulties in these areas (Tellis-James and Fox, 2016). When this study was begun SEBD was the term currently being employed. The term SEBD was designed to describe “Children ... withdrawn or isolated, disruptive and disturbing, hyperactive and lack concentration; those with immature social skills; and those presenting challenging behaviours” pp. 58 (DfE, 2001) and had been used since the 1990’s (Armstrong, 2014). However since the new SEND Code of Practice (DfE/DoH, 2014) the term SEBD has been altered to social emotional and mental health difficulties or SEMH. Since the above 2001 DfE paper, debate has continued as to the limitations of the SEBD term which led to the change to SEMH. The 2012 DfE’s Green Paper concluded that the term SEBD was

mainly concerned with the negative behaviours of a child in a broad sense. These behaviours are what are of interest to this study - how the pupils react and exhibit these behaviours in an educational setting. The new term SEMH aims at creating a narrower, clearer definition of the causes of SEBD such as the possibility of eating disorders and substance misuse (DfE, 2014). It was therefore felt that as these areas for example were not to be investigated in this study, the term SEBD would be proficient and more useful to be used.

The overview of the social, emotional and behavioural functioning of the pupils in this study was achieved through the use of established surveys. These surveys measured the social, emotional and behavioural abilities of primary aged pupils. Secondly an investigation into the ways in which these social, emotional and behavioural traits are currently managed was undertaken through interviews. Finally, through case studies, an exploration of in depth individualised knowledge was gained.

1.2: Rationale for the study (identifying the research problem)

Due to higher levels than ever of pupils with ASD in schools more teachers than in previous years will be working with this group of pupils and will be responsible for their school experience.

There will now be a brief explanation of the reasoning behind the development of this research study. This research study aimed to investigate what are the social, emotional and behavioural functioning of primary aged children with ASD. These difficulties may express themselves in different ways and therefore it would be beneficial for teachers and pupils to have a range of different strategies and approaches to support these areas. This research study therefore was planned with a view to improving the educational experience of primary aged children with ASD. The methodological choices will also be linked to the research aims of this study.

- Inclusion of pupils with Special Educational Needs in any school of the parents' choosing is policy England and Wales (DfE/DoH, 2015) unless it is incompatible or impracticable to do so due to the efficient use of resources, provision of efficient education for the pupil or the nature of the pupil's special

educational needs (Children and Families Act, 2014). Schools are expected to make any reasonable change to enable every child to attend whether the need is physical or mental (Children and Families Act, 2014). Teachers are required to differentiate all work in every subject to enable all pupils to access the curriculum at their own level (DfE/DoH, 2015). Thus it is likely that mainstream primary schools have pupils with many different SENs.

- Teachers' experience in the classroom is varied. Some classes may have a newly qualified teacher (NQT) without any experience of running a class on their own, while it is possible that other classes may have an experienced teacher of forty years' experience. The strategies used in each classroom may be extremely varied. For this reason it is suggested data collection methods will include surveys and interviews during parts one and two and a case study approach in part three to allow a snapshot of current practice to be attained.
- In addition every state maintained primary school in England and Wales is required to name a qualified teacher in charge of special needs provision in the school (DfE/DoH, 2015). As this is the only teacher required to have specialist SEN training some class teachers may have had little or no experience of working with ASD pupils and therefore this study may help to highlight good, useful practice.
- There had been some research (Duarte, Bordin, Yazigi and Mooney., (2005) and Mak, Ho and Law, (2006)) conducted regarding the levels of anxiety experienced by family members of children with ASD and how this affects the families' lives, however there had been very little research concerning the anxiety of the children themselves or how this is managed within their educational settings. This study aims to contribute to filling this gap in research.
- As a teacher myself I have become interested in different ways in which to support pupils with ASD in educational settings. The level of difficulties in social, emotional and behavioural functioning expressed by pupils with ASD during the school day varies however it is often present. It is important to remember that all pupils are individuals and a strategy which works well for one pupil may not be useful or may indeed be a further barrier to another. It is

therefore essential that the knowledge gained is individualised so a wide a range as possible of strategies and the reactions to them is investigated. Case studies are a suitable way of exploring this.

- It is also important to consider the ways in which strategies are both implemented and executed. For example it is through observations during case studies that the ways in which a teacher or an assistant interacts with a pupil can be explored in addition to pupils' reactions and responses. Tone of voice, reaction of other pupils, unexpected events in the school day and so on may all affect how a pupil reacts. It is felt that this complex interaction of factors can be best explored through the individualised knowledge gained from case studies.
- Case studies also have the added benefit of allowing the opportunity for a more in depth exploration of the topic (Zainal, 2007). The possibility of investigating how different strategies are received by pupils and the contributing factors to these, in addition to the reasons for their selection, cannot be gained solely from the generation of only generalised data. The collection of different data sources will contribute to a broader research study which it is hoped will help to examine this area of supporting pupils with ASD in their schooling in greater detail.

So, due to the current educational policy, the lack of research concerning the social, emotional and behavioural functioning felt by children themselves and how this is currently managed in schools, this study aimed to explore three distinct areas as listed below.

1. Pupils with ASD self-reported levels and types of social, emotional and behavioural functioning and parents and teaching staff perceived levels and types of social, emotional and behavioural functioning in school
2. Current strategies for managing social, emotions and behaviour in pupils with ASD
3. Case studies to gain individualised knowledge of the reasons behind these strategies and their effectiveness

A mixed methodological approach suited the design of the study. The use of the two established surveys in part one generated quantitative data which was used to explore the levels of social, emotional and behavioural functioning the pupils were experiencing, from not only their own perspective but also from that of their parents and teachers. The qualitative data generated from the teachers interviews in part two provided detailed information concerning the contemporary situation regarding support available to all levels of social, emotional and behavioural functioning of pupils with ASD. The final part of the study, the case studies, gave an individualised account of six pupils who are experiencing a range of social, emotional and behavioural functioning. This contrasted well with the generalised data collected earlier in the study. Therefore a mixed methodological design was very useful as it helped to produce the different kinds of knowledge required to answer the research questions.

1.3: Gap in literature highlighting the significance of study

As the frequency of ASD diagnosed in children has increased to now 1% of the population, there has been a doubling in the amount of research conducted in ASD between 2001 and 2011 (Pellicano, 2013). Much of this research however has focussed on medical aspects of ASD (brain functions, genetics and so on, for example Thakkar et al., (2008), and very little upon actually managing the condition.

Within the research regarding managing ASD in primary aged pupils, there has not been any studies regarding the current contemporary use of strategies and approaches to support the social, emotional and behavioural functioning of pupils with ASD. There has been some research regarding how these functions are experienced by family members (Duarte et al., 2005) but not by the pupils themselves. Likewise although there has been research conducted regarding the types of strategies available to support pupils with ASD (Lang et al. 2014), there has not been any research concerning the contemporary use of these strategies or the reasons for their non-use.

It is therefore felt that this research will help to explore the contemporary situation in which many teachers and pupils now find themselves in English primary classrooms. It is hoped that this study will highlight the areas in which pupils

experience difficulties and share effective practice with teachers. Perhaps it will also give support to teachers to reverse the reasons why some available strategies are not employed. It is hoped that this will make an improvement in the school experience for both teachers and pupils.

1.4: My own experience and interest in this area

I have been a primary teacher for fourteen years, teaching in both the UK and Ireland. As a class teacher and a special needs teacher I have worked with pupils diagnosed with ASD. These pupils have varied widely in their attainment levels and in their social, emotional and behavioural functioning. One thing which they all had in common was the observable expression of anxiety was at a rate higher than their peers. Behaviours such as rocking, crying and echolalia were all witnessed and as a teacher it was very difficult to know how to support these behaviours. For some pupils the teacher is given strategies from SALT, EdPsych, OT, previous teachers, SENCO etc but very little for others. For those strategies given, there are often many reasons why they are impractical or are not used.

I have also worked as a supervisor of teachers in training and NQT's both within my own school and as an outreach supervisor from a local university. For teachers just beginning their careers it is often very difficult to know how to support pupils with SEN, in particular ASD. For these reasons I became interested in the training of teachers and the different strategies which could be used to support pupils with ASD.

1.5: Research aims

This research study developed the following aims in response to the findings of the literature review. These aims directly link to the primary aim of investigating what are the social, emotional and behavioural functioning of primary aged children with ASD and how any difficulties they may experience in these areas are managed. This research study aimed to improve the educational experience of primary aged children with ASD.

Part 1:

- To explore the levels of social, emotional and behavioural functioning of primary aged pupils

Part 2:

- To explore the knowledge and experience classroom teachers have regarding ASD

Part 3:

- To explore how support for pupils with ASD is organised in classrooms

1.6: Research objectives

The research aims listed briefly above created the following research objectives in which this study aimed to answer:

Part 1:

- To investigate the levels of social, emotional and behavioural functioning of primary aged pupils
- To investigate the above from teacher, parent and pupil perspectives

Part 2:

- To investigate the knowledge classroom teachers have regarding ASD
- To investigate which strategies and approaches are used in the contemporary primary classroom
- To explore the reasons surrounding the non-use of strategies

Part 3:

- To explore how support for pupils with ASD is organised in classrooms
- To investigate what this support looks like

1.7: Research questions

The overall design will now be explained by exploring the aims for each of the three parts.

Part 1

Aim 1: To explore the reported level of social, emotional and behavioural functioning of primary aged children identified as having ASD reported by the pupils and their parents and teachers.

What pattern of social, emotional and behavioural difficulties are found in a group of primary aged pupils with ASD from different perspectives?

The areas covered were:

- a) What pattern of social, emotional and behavioural difficulties (SDQ) are found in a group of primary aged pupils with ASD from different perspectives in terms of:
 - Emotional symptoms
 - Conduct problems
 - Hyperactivity/inattention
 - Peer relationship problems
 - Prosocial behaviour
- b) Of those showing difficulties what is the specific pattern of anxiety difficulties (RCADS)?
 - Social Phobia
 - Panic Disorder

- Major Depression
- Separation Anxiety
- Generalised Anxiety
- Obsessive-Compulsive

To what extent do the different participants' reports correlate?

Part 2

Aim 2: To examine how teachers make sense and address the social, emotional and behavioural needs of primary children with ASD in class settings.

What initial concerns did the teacher have regarding teaching pupils with ASD?

This was covered by focusing on the following areas:

- a) i. What understanding, background knowledge and training do teachers have about supporting the social, emotional and behavioural needs of primary ASD pupils?
- ii. Which strategies and techniques (including assistive technologies) are currently employed in educational settings? (generalisation) How are primary teachers responding to the social, emotional and behavioural difficulties experienced by primary ASD pupils in the ordinary classroom?
- iii. Why do teaching staff feel these strategies work for them?
- iv. How and to what extent have teachers been supported in responding to the social, emotional and behavioural needs of primary ASD pupils and how can this support be developed for teachers and pupils?
- v. Do teachers use the same strategies when dealing with anxiety with pupils with and without ASD?

iv. Which other strategies are used to support anxiety with pupils without ASD? (if applicable)

b) i. Which strategies were not so useful?/Which strategies have the teaching staff ceased using?

ii. How were the decisions about using these strategies and techniques made? To what extent do teachers review, develop and abandon approaches for assisting pupils with ASD needs?

Therefore using these focuses the following final questions were developed:

- What understanding, background knowledge and training do teachers have about supporting the social, emotional and behavioural needs of primary pupils with ASD?
- How are primary teachers responding to the social, emotional and behavioural difficulties experienced by primary pupils with ASD in the ordinary classroom?
- To what extent do teachers review, develop and abandon strategies for assisting pupils with ASD needs?
- How and to what extent have teachers been supported in responding to the social, emotional and behavioural needs of primary pupils and how can this support be developed for teachers and pupils?

Part 3

Aim 3: To explore in depth how teachers teach and organise support for pupils with ASD who show different patterns of social, emotional and behavioural functioning in primary settings.

The following areas were explored:

- a) What kinds of emotions does the pupil experience?
- b) How does the pupil behave in class?
- c) If there is anxiety how is it expressed?
- d) Which approach/approaches have been shown by the teacher to be the most useful? What role does ICT play in assistive technologies?
- e) How does the pupil respond in class?
- f) What is the relationship between the teacher and the teaching assistant? How do they interact and work together?
- g) Is I.C.T. and assistive technologies visible in class as a component of both preventative and restorative approaches? How large a role does it play?
- h) What is the level of interaction the pupils with ASD and adults during class lessons?
- i) To what extent are the adults (TA, teacher and SENCO) working in a partnership? How does this express itself?
- j) How included both academically and socially are the pupils with ASD into the class activities?
- k) To what extent and in what ways are the social, emotional and behavioural needs of the pupils with ASD being met in the classroom?

These focuses were summarised into the following questions:

- What is the level of interaction between the pupils with ASD and adults during class lessons?
- To what extent are the adults (TA, teacher and SENCO) working in a partnership? How does this express itself?

- How included both academically and socially are the pupils with ASD into the class activities?
- To what extent and in what ways are the social, emotional and behavioural needs of the pupils with ASD being met in the classroom?

Parts one and two therefore produced different kinds of data to part three. These different kinds of knowledge were useful for different purposes. Through parts one and two it is possible to understand the current types and levels of social, emotional and behavioural functioning and how this is being addressed. The exploratory work undertaken in the case studies in part three contained more in depth analysis in a contextual account in order to understand in a more individualised way the knowledge regarding the effectiveness of strategies and the reasons behind their usage or non-usage.

1.8: Organisation of the thesis

This thesis has been organised into the following chapters:

Chapter 1 – Introduction

An introduction to this research study providing a brief overview of the issues to be addressed

Chapter 2 – Literature Review

An exploration of the current literature available on this subject.

Chapter 3 – Methodology

A detailed account of how the three sections of the study were conducted.

Chapter 4 – Results

The presentation of the results from all parts sections of the study.

Chapter 5 – Discussion and Conclusion

A discussion of the results and conclusions drawn from these findings. Discussion of further possible areas for research.

1.9: Summary

From the above the reader will have an idea concerning the areas which this thesis explored. As explained above the following chapters will explain in far greater detail the literature which led to this focus and the ways in which the study was undertaken in the field followed by the results and conclusion.

Chapter 2: Literature Review

2.1: Introduction (overview of the areas which will be covered)

The primary focus of this research study is the exploration of social, emotional and behavioural functioning experienced by children with ASD of primary age in educational settings and how, if difficulties are present, these experiences are managed. This chapter reviews the literature concerning primary aged pupils with ASD and how the difficulties which may arise from this might be managed. This review starts with the strategies used to search the databases followed by how ASD is defined. This includes reference to diagnostic criteria for ASD and prevalence rates. Theories about ASD in childhood and its impact in schooling and learning are discussed, including reference to policy regarding general inclusion and educating children with ASD in primary educational settings. The review then moves to explore social, emotional and behavioural functioning of primary aged children and links to ASD, anxiety and depression. It also discusses ways in which pupils with special educational needs are supported in inclusive classrooms. It concludes with establishing the gaps in the literature this study aims to address.

Therefore this literature review chapter is arranged under the following headings:

a) Autistic Spectrum Disorder (ASD) definition and school policies – (2.4)

- A definition of ASD and research/theory about ASD concerning observable difficulties experienced by children with ASD
- Diagnostic criteria for ASD – DSM-4, DSM-5, ICF and ICD-10, incidence and change
- Policy regarding general inclusion and educating pupils with ASD in primary educational settings
- Definition of SEN categories

b) Social, emotional and behavioural functioning of primary aged pupils and links to ASD, anxiety and depression – (2.5)

- Social, emotional and behavioural functioning of primary aged children
- Observable social, emotional and behavioural functioning of children with ASD
- Highlighted connections between low social, emotional and behavioural functioning in children with ASD and heightened levels of anxiety and depression
- Origin of anxiety and stress and anxiety connections
- Established measurement of social, emotional and behavioural functioning including anxiety

c) Ways in which pupils with SEN are supported in inclusive classrooms – (2.6)

- Managing inclusive classrooms – general SEN and ASD
- Established strategies, approaches and assistive technologies
- Previous research regarding the management of low social, emotional and behavioural functioning and anxiety and approaches in the U.K.

d) A brief summary of the literature – (2.7)

- A review of the literature highlighting knowledge and gaps in research.

2.2: Literature review structure

This literature review aims to present the current literature findings concerning the diagnosis and prevalence of ASD and how the difficulties which may arise are currently being managed in primary settings. All relevant literature found is included in this chapter highlighting how this was used as the foundation and starting point in the development of the research questions for this study.

2.3: Databases

In order to read around the topic of social, emotional and behavioural functioning in primary aged pupils in addition to the anxiety and stress experienced by pupils with ASD, relevant literature was found in the following ways:

ERIC (Education Research Information Centre) – search keywords include – anxiety, primary children, stress, stress primary children, social, emotional and behavioural functioning

BEI (British Educational Index) – search keywords include – anxiety, primary children, psychological disorders autism, stress ASD behaviour, social ASD, communication ASD

Psych – World of Science

A wide range of literature found via the above methods was found to be useful in this research. Both professional literature and empirical research articles were investigated, as well as the use of relevant policy documents from, for example, The National Autistic Society and the Department for Education.

2.4.1: Nature/Definition of ASD – What are the features of ASD? A diagnostic categorisation of ASD

Firstly this thesis will consider the nature of what exactly ASD is currently thought to encompass moving on to how it diagnosed. The number of primary aged children diagnosed with ASD has risen considerably during the last couple of decades (Kielinen, Linna and Moilanen, 2000 and Fombonne, 2005). Within this group of diagnosed children, ASD affects more boys than girls (four times as many boys as girls are affected – Ambitious about Autism (2017) and Park et al. (2017) and the severity is different in each person. Firstly the definition of ASD will be explored. What is autism spectrum disorder (ASD)?

Autistic spectrum disorders (ASD) represents “a continuum of cognitive and neurobehavioral disorders” (World Health Organization (10th ed.), 1990). *Classification of Mental and Behavioural Disorders: Clinical descriptions and diagnostic guidelines*. These developmental disorders can manifest themselves in different difficulties which will be discussed in greater depth later. All of these

disorders are lifelong problems which affect thinking, feeling, language and the ability to relate to others (American Psychiatric Association, 2013) *Diagnostic and statistical manual of mental disorders* (5th ed.). It is important to note that an ASD diagnosis must be generated through observations of certain behaviours and actions as a medical test does not exist to confirm ASD (Centers for Disease Control and Prevention, 2018).

As a medical test to confirm or dismiss ASD does not exist certain behaviours and actions as mentioned above need to be present and observed, These behaviours and actions are discussed below. The absence of a medical test for diagnosis can be problematic as diagnosis rests upon certain behaviours and actions being able to be accurately accessed by a professional. Early diagnosis is preferable as it stands to reason and common sense that the earlier a diagnosis is received, the earlier interventions and support can begin. Indeed Campbell et al., (1996) found that the earlier the diagnosis, the more effective interventions are with younger children at improving their functioning. However there is a difficulty in diagnosing children younger than three as the diagnostic tools for children of that age need refining, Baird et al. (2001). As the diagnosis criteria can be lengthy, not all children are identified early and wait until they are at school age, Levy et al., (2003). Therefore there are pupils who are not identified at the start of their primary school career and join their classes with no additional support. Different diagnostic labels have been introduced which highlight aspects of behaviour which people with ASD have in common – difficulties in social interaction and communication for example which are listed below.

ASD has been understood to encompass the following spectrum of difficulties (Humphrey and Parkinson, 2006). It is generally accepted that ASD can be identified by the presence of some/all of the following social, emotional and behavioural symptoms or features (Humphrey and Parkinson, 2006):

i. Communication - Communication problems (difficulty with language)

The difficulties with communication are a common occurrence among those with ASD (Humphrey and Parkinson, 2006). Although Humphrey and Parkinson (2006) argue that communication problems are inherent to an ASD diagnosis due to their

prevalence, the APA counter argue that this difficulty is most commonly found in such a wide range of syndromes and disorders that inclusion in the ASD diagnosis may be misleading. It has been removed from the DSM-5 diagnostic framework as thought on this subject has adapted and it is now felt that communication problems encompasses such a wide variety of difficulties that linking it as a criteria for ASD diagnosis is too limiting (American Psychiatric Association, (2017)). This removal is highlighted in section 2.4.2.

ii. Social and Emotional Understanding - Difficulty relating to people, things and events (difficulty interacting)

The limited ability to relate to others is a well-documented issue connected to people with ASD (Scheiner, 2017, Lacava, Rankin, Mahlios, Cook and Simpson 2010 and Carter, E. et al., 2017). The difficulty in empathising (Sigman and Ruskin, 1999) with others or interacting in a positive, equal way with others is perhaps one of the first aspects of a child with ASD's behaviour a class teacher notices. Frith (1989) describes the key defining symptoms of ASD is the substantial difficulty in social interactions. Some may speak at length on a chosen topic however never interact with their audience (Scheiner, 2017). Indeed they may also exhibit signs of being unconnected to their surroundings by either speaking too much or not at all in a one to one conversation.

iii. Behavioural - Repetitive body movements/behaviours (flapping when routines alter)

Behavioural problems are often observable during times of change or uncertainty (Tracey Galialsatos and Graff, 2003). These behavioural problems express themselves through repetitive body movements. Repetitive body movements and behaviours includes echolalia, rocking, flapping for example (Richler et al., 2007). The possibility of self-injury and aggression is present in these situations.

The above characteristics vary considerably between individuals. Despite this, historically over the past 30 years, prior to DSM-5, they have been widely accepted as pillar posts from which ASD may be diagnosed. Wing's (1991)

description of the 'triad of impairment' concurs these corner posts as does Powell and Jordan (1993) work and Jordan (2002) which describe how ASD encompasses the same range of disorders –

- All aspects of communication;
- Social and emotional understanding;
- Inflexibility in thinking and behaviour.

The ways in which an ASD diagnosis is made now follows using the two main criteria for an ASD diagnosis – the DSM-4/DSM-5 (updated) and the ICD-10. Particular reference has been made to the social, emotional and behavioural difficulties which are the observable pillars posts of an ASD diagnosis and the focus of this study.

2.4.2: ASD diagnosis - DSM-4 and DSM-5 (incidence and change over the last decade)

There are currently two sets of criteria - the Diagnostic and Statistical Manual of Mental Disorders (DSM-5) or the ICD-10 (International Classification of Diseases) employed to diagnose developmental disorders including ASD. The DSM-5 criteria replaced the DSM-4 criteria in 2013 which resulted in some interesting changes. We shall first consider DSM-5 and then the ICD's criteria

During the last decade the DSM – IV criteria was one of the two main standardised criteria for diagnosing ASD in childhood, the other being ICD-10. The DSM-5 is widespread in its use in the USA as it is published by the American Psychiatric Association and the ICD-10 is used throughout the world.

As mentioned above the American Psychiatric Association's Diagnostic and Statistical Manual of Mental Disorders released the new DSM-5 framework in 2013 replacing the DSM-4. The DSM-5 is now used by the majority of organisations, individuals and governments to diagnosis psychiatric disorders such as ASD the National Autism Society (2016). With the introduction of the new DSM-5 the diagnosis of ASD related disorders has become more medically and scientifically accurate within their usage.

Humphrey and Parkinson (2006), Jordan (2002) and Wing (1991) all concurred that social, emotional and behavioural functioning are at the heart of an ASD diagnosis. Using either the DSM-4/DSM-5 or the ICD-10's criteria it is clear to see that social, emotional and behavioural functioning are indeed a cornerstone of an ASD diagnosis.

This thesis will now briefly examine and compare the two sets of criteria – DSMIV/DSM-5 and ICD-10.

DSM-4 (American Psychiatric Association, 1994).

The DSM-4 diagnosed ASD under five different Pervasive Developmental Disorders (PDDs) giving these following specific diagnoses:

Autistic Disorder

Asperger's Disorder

Rett's Disorder

Childhood Disintegrative Disorder

Pervasive Developmental Disorder Not Otherwise Specified (PDD-NOS)

The observable criteria of each diagnoses will now be briefly explored to highlight the central role **social, emotional and behavioural** difficulties play.

i. Autism disorder – Abnormal/impaired development in **social interaction** and communication, and **(behaviour)** and interest must be observed.

1. SOCIAL - Impairment in social interaction

- Impairment in the use of nonverbal behaviours
- Failure to develop relationships
- A lack of spontaneous seeking to share
- Lack of social or emotional reciprocity

2. Impairments in communication in at least one of the following:

- Delay in, or total lack of, the development of spoken language
- Impairment initiating or sustaining a conversation

- Stereotyped and repetitive use of language
- Lack of make-believe or social imitative play

3. BEHAVIOURAL - Repetitive and stereotyped patterns of behaviour eg.:

- Preoccupation with abnormal stereotyped patterns
- Inflexible adherence to routines
- Stereotyped and repetitive mannerisms
- Persistent preoccupation with parts of object

Delays or abnormal functioning in:

- **Social** interaction
- Language as used in social communication
- Symbolic or imaginative play

ii. Asperger's Disorder - Severe and sustained impairment in **social interaction** and the development of **restricted, repetitive patterns of behaviour**, interest, and activity. The same criteria as for Autistic Disorder however a clinical significant delay in language is not present.

iii. Rett's Disorder - Development of multiple specific deficits following a period of normal functioning after birth. **Decreased interest in their social environment** and impairment in language development.

- Normal prenatal and prenatal and psychomotor development
- Deceleration of head growth
- Loss of previously acquired hand skills
- Loss of **social engagement**
- Poor coordination
- Severely impaired language development

iv. Childhood Disintegrative Disorder - Regression in multiple areas of functioning following a period of at least two years of normal development

- Normal development for the first 2 years
- Clinically significant loss of previously acquired skills
- Expressive or receptive language
- ***Social skills or adaptive behaviour***
- Bowel or bladder control
- Play and motor skills
- Abnormalities of functioning in:

a) SOCIAL - Impairment in social interaction

b) Impairments in communication

c) BEHAVIOURAL - Restricted, repetitive, and stereotyped patterns of behaviour

v. Pervasive Developmental Disorder Not Otherwise Specified - Severe and pervasive impairment in reciprocal ***social interaction*** or verbal and nonverbal communication skills and ***stereotyped behaviours***, interests, and activities.

Therefore within the DSM-4 criteria observable ***social*** and ***behavioural*** difficulties were always evident in those individuals receiving a diagnosis. The problem with the DSM-4 centred on the fact that different diagnoses were being given by different centres resulting in low reliability (Ghanizadeh and Firoozabadi, 2012). It also only focused upon identifying school-aged children with ASD related disorders rather than younger children (American Psychiatric Association, 2017).

The umbrella below, figure 1, creates an overview and illustrates the symptoms which needed to be observed within different areas for a diagnosis of a PDD, ASD or Asperger's disorder to be reached from DSM-4 (Hill, 2013). It is included here as it provides a clear overview of the high significance and essential inclusion of ***social*** and ***behavioural*** difficulties in a DSM-4 diagnosis of 'Autistic Disorder' and 'Asperger's Disorder'.

Figure 1: DSM-4 criteria

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DSM-5

The new DSM - V criteria (APA, 2013) redefined the ASD diagnosis by removing Autistic Disorder, Asperger's Disorder and Pervasive Developmental Disorder Not Otherwise and replacing them with a simple diagnosis of Autism Spectrum Disorder (although the labels of Asperger's and PDD-NOS are still in common, spoken use). The new DSM-5 criteria, Psychiatry Online (2015) created a single umbrella diagnosis wherein children must have shown symptoms from early childhood. Rett's Disorder has been removed and is no longer part of the autistic spectrum.

Therefore the two diagnoses under the DSM-5 are now much reduced to only:

- i. Social (pragmatic) communication disorder
- ii. Autism Spectrum Disorder

The criteria for an ASD diagnosis using the new updated DSM-5 framework now follows. The social, emotional and behavioural functioning focus remains as a central feature for a diagnosis.

i. **Social (pragmatic) communication disorder**

- Difficulties in the **social use** of verbal and nonverbal communication in all of the following:
 1. For **social purposes**
 2. Impairment of the ability to change communication to match context
 3. Difficulties taking turns in conversation, rephrasing using verbal and nonverbal signals to regulate interaction.
 4. Difficulties understanding what is not explicitly stated
- Limitations communication, **social participation, social relationships**
- First observed in the early developmental period.

ii. **Autism Spectrum Disorder**

- **SOCIAL** - Deficits in **social communication** and **social interaction**
 1. **Abnormal social approach** and failure of back-and-forth conversation, reduced sharing of **emotions** and failure to initiate or respond to social interactions.
 2. Deficits in communicative **behaviours used for social interaction**.
 3. Deficits in developing, maintaining, and understanding relationships and adjusting **behaviour to suit various social contexts**.

- **EMOTIONAL AND BEHAVIOURAL** - Restricted, repetitive patterns of behaviour:
 1. **Stereotyped behaviours**/repetitive motor movements
 2. **Insistence on sameness, inflexible behaviour** (e.g., **extreme emotional distress** at small changes, difficulties with transitions)
 3. Highly restricted, fixated interests that are abnormal in intensity or focus (e.g, **strong emotional attachment** with unusual objects)
 4. **Emotional** reaction to sensory input or unusual interests in sensory aspects of the environment.
- Symptoms must be present in the early developmental period.
- **Impairment in social, occupational, or other important areas of current functioning.**

As mentioned above as younger children can now be included, these changes have encouraged early diagnosis and the opportunity for people with ASD to be given a diagnosis earlier. Naturally the earlier diagnosis by using the DSM-5 will result in earlier interventions being made available and more time allows the possibility of greater success.

The language delay criteria has been removed as many reasons outside of ASD may cause this to occur, although social communication difficulty remains. The changes from DSM – 4 to DSM – 5 aimed to improve the reliability of diagnosis to good. Preliminary results of DSM-5 support this (Mandy et al., 2015).

Most children with ASD have remained as diagnosed children with ASD when reassessed under the new criteria. In a trial for the ‘Autism Speaks’ group children assessed under DSM - 4 were also retested under DSM - 5 and 91% retained their diagnoses implying that those who do not generally meet this new criteria did meet the criteria for Social Communication Disorders (Autism Speaks, 2018).

Therefore at the heart of a DSM – 5 ASD diagnosis lies “significant impairment in social, occupational or other areas of current functioning” (DSM-5, 2013). It is

through difficulties in managing social, emotional and behavioural functioning that ASD can be identified and diagnosed.

2.4.3: ASD Diagnosis - International Classification of Functioning, Disability and Health (ICF) and International Classification of Diseases (ICD – 11)

As mentioned above, there are two current sets of criteria for diagnosing ASD. In addition to DSM-5, the International Classification of Functioning, Disability and Health (ICF) classifies health and health related topics. It is the World Health Organisation (WHO)'s framework from which health and disability can be measured for both individuals and large populations, WHO (1990). The ICF is the accepted standard from which to measure health and disability as it have been endorsed in 2001 by all one hundred and ninety one WHO member states (WHO 54.21).

The International Classification of Functioning (ICF) has highlighted four areas which can be investigated to assess a child's well-being and health. These four areas are:

1. *body structures* – parts of the body (sensory ability, nerves, organs, limbs etc);
2. *body functions* – digestion, memory, thinking skills, respiration etc;
3. *activities and participation* – completion of tasks (walking, talking, learning, feeding, dressing etc) and relationships, school attendance, hobbies etc;
4. *environmental factors* – personal factors and attitudes.

The ICF differs from the DSM as it also includes environmental and contextual factors in the child's life which is not within the DSM-5, to create a more holistic view of the individual. The incorporation of these different areas allows the integration of mental, social and physical aspects of a health condition. The ICF framework acknowledges that a straightforward physical or mental diagnosis does not examine a patient's actual functional abilities in the wider sense. Therefore the diagnosis is not purely the final result but rather just part of an overview of the patient which includes a description and investigation into their environment, activities and participation and their development.

Therefore the International Classification of Diseases (ICD-11) is the other diagnosing tool in addition to the DSM-5 currently available to professionals when investigating children with possible ASD. The ICD-11 was created like the ICF by the World Health Organisation. The previous version, ICD-10 combined medical understanding with the developmental diagnosis and ongoing family support (WHO, 1990). By including environmental and contextual factors Gray et al. (2008) explains that families have more faith and confidence in the support and this allows the clinician diagnosing the child to individualise the support to each particular child and has the result of promoting child functioning and family well-being. As with the DSM-5, the new ICD – 11 has a set of standardised criteria from which a diagnosis of ASD can be generated. The ICD - 11 along with the DSM-5 is suitable for use with primary aged children.

The previous ICD-10 standardised criteria for diagnosing ASD is currently as follows. They have been included here in order to highlight the social, emotional and behavioural difficulties illustrating how these functions are at the heart of an ASD diagnosis. This is not just true in the DSM-5, but also in the ICD-10. The following are the areas the ICD-10 labels:

- Childhood autism;
- Atypical autism;
- Rett's syndrome;
- Other childhood disintegrative disorder;
- Overactive disorder;
- Asperger's syndrome.

F84.0 – Childhood autism

- i. abnormal development before the age of three
- ii. the characteristic type of ***abnormal functioning*** in all the three areas of psychopathology: reciprocal ***social interaction***,
communication

restricted, stereotyped, repetitive behaviour.

- iii. a range of other nonspecific problems, eg. phobias, are common

F84.1 – Atypical autism

- i. abnormal development after age three
- ii. lack of sufficient demonstrable abnormalities required for the diagnosis of autism (**namely, reciprocal social interactions, communication, and restricted, stereotyped, repetitive behaviour**)

F84.2 – Rett Syndrome

- i. normal early development is followed by loss of speech and locomotion
- ii. loss of purposive hand movements and hyperventilation
- iii. deceleration in head growth
- iv. **social and play development are arrested**
- v. trunk ataxia and apraxia

F84.3 – Other childhood disintegrative disorder

- i. a loss of previously acquired skills
- ii. general loss of interest in the environment
- iii. stereotyped, repetitive motor mannerisms/behaviour**
- iv. autistic-like abnormalities in **social interaction** and communication

F84.4 – Overactive disorder

- i. IQ below 35 who show **major problems in hyperactivity, in attention and stereotyped behaviours**
- ii. do not benefit from stimulant drugs
- iii. in adolescence, the over activity tends to be replaced by underactivity
- iv. a variety of developmental delays

F84.5 – Asperger syndrome

- i. **abnormalities of reciprocal social interaction**
- ii. a restricted, stereotyped, repetitive repertoire of interests and activities**
- iii. no general delay in language or cognitive development
- iv. marked clumsiness

From these two sets of criteria, the DSV-5 and the ICD - 10 it is possible to recognise the similarities which when present generate a diagnosis of ASD. Both the new DSM - V and the ICD - 10 require there to be **social** difficulties, and unusual types of **behaviour** observable in the individual. Both the DSM-5 and the ICD - 10

have both separated Rett's disorder from the general ASD category and in both of these diagnostic tools this area have it's own separate diagnosis.

As mentioned above the ICD-10 has only recently been updated to the ICD-11. The ICD-11 was first made available in June 2018 to be implemented in January 2022. The guidelines for the new ICD-11 appear to show how its criteria for a diagnosis of ASD has been developed and altered and can be seen to be more in line with the DSM-5 criteria. Within the new ICD-11 framework section 6A02 is concerned with an ASD diagnosis.

The new ICD-11 description of ASD is described as:

- persistent deficits in the ability to initiate and to sustain reciprocal **social interaction** and **social communication**
- a range of **restricted, repetitive, and inflexible patterns of behaviour** and interests
- onset of the disorder occurs during the developmental period, typically in early childhood, but symptoms may not become fully manifest until later, when **social demands exceed limited capacities**
- **impairment** in personal, family, **social**, educational, occupational or other important areas of functioning observable in all settings
- individuals along the spectrum exhibit a full range of intellectual functioning and language abilities.

The ICD-11 has removed the previous inclusion of Asperger's Syndrome which was included in the ICD-10 as F84.5. This removal aligns the ICD-11 more closely with the DSM-5 which also removed Asperger's Syndrome. The new ICD-11 makes a differentiation between those with ASD and an intellectual disability and those with ASD without an intellectual disability. The ICD-11 also makes a note of the differences of these disabilities with reference to verbal ability. This is different to the DSM-5 criteria for an ASD diagnosis as the DSM-5 only mentions that impairments may be present. It is clear therefore that **social, emotional and behavioural difficulties** are the benchmarks for an ASD diagnosis and must be observable in all diagnosed ASD individuals whichever diagnostic criteria, DSM or ICD, is employed. Although the extent to which these difficulties affect the individual is varied and spread across the spectrum, they are always present (2.4.4). It is how these social,

emotional and behavioural difficulties are currently being met in the primary classroom which is of interest and the focus of this study. We shall now consider the range of severity those with ASD experience.

2.4.4: – Severity range of social, emotional and behavioural functioning displayed in an individual with ASD

As described above ASD is a spectrum disorder, with symptoms ranging from mild to severe. Depending on an individual's abilities, the individual with ASD can be identified as mild to severe and the level of developmental delay is unique to each individual. Gray, Msall and Msall (2008) explains how these difficulties can be classified in terms of severity (high, low) in addition to prevalence (high, low) (citing Accardo, 2007). Gray et al., (2008), explains how high severity and low prevalence (1–2 per 1000) also has significant intellectual disabilities (IQ < 50–55) with a prevalence of 5 per 1000. Whereas low severity and high prevalence is illustrated by mild intellectual disabilities which is an IQ of 55 to 70 (30 per 1000), language disorders (100 per 1000) and learning disabilities (70-100 per 1000).

Below is figure 2, available on the 'Autism Speaks' website with permission from DSM-5, which illustrates how the level of severity is considered from level 1 at the milder end of the spectrum to level 3 at the severe end. In this figure there are 2 columns sorting social functioning difficulties from behavioural issues.

Figure 2: Table showing the severity level symptoms within social, emotional and behavioural functioning (DSM-5, 2013)

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2.4.5: Early identification and frequency of ASD in society

As previously mentioned it stands to reason that the earlier an illness or difficulty is identified, the earlier treatments can begin. We will now examine how schools in England have been influenced by government policies of firstly identifying pupils with SEN and/or ASD before interventions can begin. Current policy in England require schools to have a clear approach to identifying all SEN pupils quickly. This would mainly include a lack of progress despite good quality teaching

and a failure to close or indeed the widening of the attainment gap between a child and the majority of their class. As the benefits of early identification are widely recognised (DfE/DoH, 2015), the class teacher, SENCO, child and parents should not delay introducing interventions. As highlighted in the DSM and ICD criteria for an ASD diagnosis these interventions are not just for academic progress but also for social, emotional or behavioural needs. Indeed these social, emotional and behavioural needs are at the heart of an ASD diagnosis and therefore are a central identifying feature of pupils with ASD. The severity or extent to which these difficulties are present vary, as described previously, however their presence adversely affects the DfE's goal of all children making a successful transition to adult life. An 'Early Help Assessment' may be appropriate if persistent disruptive or withdrawn behaviours are present. This assessment helps to identify if the cause is SEN or any other causal factors – mental health issues or domestic circumstances for example which can reduce the costly exercise of unnecessary interventions at a later stage.

It has already been mentioned that there has been a rise in the frequency of children with ASD in UK schools. The National Autistic Society currently publishes its own data regarding the number of people currently living with ASD in UK schools. At present they estimate that there are approximately 700,000 people living with the condition which accounts for about 1.1% of the UK population. The prevalence rate is based on two studies, one concerning children and the other concerning adults. The prevalence study of children, (Baird G. et al., 2006) looked at a population in the South Thames area concerns with the National Autism Society data and found that the number of children with ASD was substantially higher than previously recognised at approximately 1% of the child population. The study of the prevalence of adults with ASD has been undertaken by both Brugha et al. (2009), and The NHS Information Centre, Community and Mental Health Team. Brugha et al. (2009) also found that approximately 1% of the population were living with ASD which was an increase and higher than expected. Brugha et al. (2009) noted that there were no increased services to support the emotional difficulties that having ASD brings. These are the only known prevalence study of ASD within the UK adult population. There are no apparent government figures with which to compare these findings. Brugha et al. (2009) findings of the non-existence of emotional services for

individuals with ASD suggest the adults with ASD would benefit from more help in this area. This could be true for children with ASD as well. The earlier interventions for emotional support take place, a pillar post for an ASD diagnosis, the better the outcomes (DfE/DoH, 2015)

2.4.6: Rise of number and the learning environment of ASD pupils in schools

It has been mentioned above that the number of pupils with ASD has risen. We will now consider in more detail how this rise is reflected in both research and in the lives of those with ASD.

As ASD is affecting a continually increasing number of people, currently an estimated 1% of the population, there has been a doubling in the amount of research conducted in ASD between 2001 and 2011 (Pellicano 2013). It follows that as the frequency of pupils with ASD increases, the difficulties which this brings are also more apparent and schools and education will need to recognise and adapt to this (Brugha et al., 2009).

Although in previous generations special need pupils have been taught separately from their mainstream peers, current thought on good practice encourages all children regardless of their abilities to attend a mainstream primary school based upon the Warnock Report of 1978. Although Mary Warnock herself later recounted some of these ideas as being unnecessarily bureaucratic and a cause of contention between home, school and the local authorities, (Warnock, 2005), the current Code of Practice (DfE/DoH, 2015) promotes the inclusion of pupils with SEN in mainstream schools especially if the parents vocalise this preference. People with ASD have difficulty in relating to others and understanding the world in which they live. These social, communicative and behavioural problems (Kanner, 1943) can create emotional distress which can be seen increasingly due to the rise in the number of pupils with ASD in mainstream primary schools. How can this be best managed for the children with ASD? This is the question this study aimed to investigate and explore.

The presence of children with ASD in mainstream schools along with the rise in the frequency of children with ASD (Kielinen et al, 2000), has resulted in a significant increase in the number of pupils within primary schools on the ASD

spectrum. This creates different challenges for both the pupils and the school. The frequency of ASD has increased in the US from 1 in 1000 in 1980, to 1 in 150 in 2000 to 1 in 88 in 2008 (Davis et al. (2014)). There has been however much debate over the accuracy of these US prevalence rates, (Mandell and Lecavalier, 2014). Concern was raised as the researchers did not actually observe any child during the study. In addition to this the findings showed that prevalence increased depending on location, race and ability. Mandell and Lecavalier (2014) also noted that the prevalence rates were based upon the amount of testing for ASD and without taking into account whether or not the child actually generated an ASD diagnosis at the end of the testing. Therefore it was concluded that these prevalence rates may be misleading. However within the UK the prevalence of ASD has also been found to have increased although not to quite a high frequency as noted in the US. Charman (2003) found that 6/1,000 now can be classified as having ASD compared with previous findings of 0.5/1,000. Due to their ASD, in the future as adults, these children are less likely to have a job or social contacts and are more likely to struggle with well-being (Howlin, Goode and Huttonal, 2004, Howlin, 2013). They are also as adults to be less likely to hold a degree and academic qualifications (Brugha et al., 2009). Therefore it is important that more effective interventions are designed to support this significant number of children with ASD during their school years.

Some research has been undertaken regarding what difficulties a child with ASD may experience based upon their social, emotional and behavioural functioning. The level of emotional stress surrounding children with ASD of primary age has been of interest and investigated in other studies, (Mak et al., 2007). This study found that maternal stress was higher in mothers of children with ASD when their own sense of coherence was lower despite the level of severity the child was experiencing. However the social, emotional and behavioural functioning which may express itself through stress and anxiety, experienced by children with ASD themselves and the ways in which these difficulties are managed in the UK has not yet been approached. Indeed the actual and perceived levels of different types of social, emotional and behavioural difficulties children with ASD experience has not been investigated or compared yet. Through this literature review links will be made between the likelihood of social, emotional and behavioural difficulties of children with ASD compared to their peers without ASD. These findings will inform and

shape the research questions to highlight which strategies are most successful in raising the social, emotional and behavioural functioning of children with ASD and therefore reduce the level of anxiety and difficulties.

2.4.7: Policies of educating pupils with SEN including ASD in educational settings

The government of England have published a range of guidance documents to support schools in their endeavours to include SEN pupils in mainstream schools. We will now consider how these documents explicitly lay out the definitions of SEN. The latest government guidance in England, 'Special educational needs and disability code of practice: 0 – 25 years (DfE/DoH, 2015) lays out the relevant legislation and legal framework from which all key workers in educational settings must work. Following on from 'The Equality Act 2010', 'Children and Families Act 2014' and 'The Special Educational Needs and Disability Regulations 2014' all schools must strive to improve the outcomes with high aspirations and expectations for children and young people with SEN. In order for all children with ASD to achieve their best, become confident individuals living fulfilling lives and make a successful transition into adulthood, schools are required to first identify and then support and address children with ASD on roll. Children are to be supported by engaging in the activities of the school alongside children without SEN, working with a designated SEN teacher, having a SEN governor supporting the school, links with parents and through an SEN information report. All children with ASD should have their progress analysed and the teaching they receive supported through professional development for both teaching and support staff (DfE, 2015) however this is not always found to be the case particularly with new teachers (Garner, 1996). The Special Educational Needs and Disability Act (2001) extended the duty of care of educating pupils with SEN to local authorities (LA's), ensuring that a Statement is prepared for each pupils with SEN in a mainstream school explaining how the pupil's needs are to be met. The 'Children and Families Act', 2014, introduced the new Education Health and Care Plan (EHC). Although the aim of SEN inclusion in mainstream schools remains there were some important developments from the previous system including putting the child at the heart of any decisions which are to be made and developing

partnerships between all the major stakeholders involved (child, parent/carer, school, local authority etc.):

- (a) the views, wishes and feelings of the child and his or her parents, or the young person
- (b) the importance of the child and his or her parent, or the young person, participating as fully as possible in decisions relating to the exercise of the function concerned;
- (c) the importance of the child and his or her parent, or the young person, being provided with the information and support necessary to enable participation in those decisions;
- (d) the need to support the child and his or her parent, or the young person, in order to facilitate the development of the child or young person and to help him or her achieve the best possible educational and other outcomes.

At present a survey conducted by The National Autistic Society discovered that 63% of children with ASD are not in the kind of school their parents believe would best support them. The issues surrounding children with ASD in school have resulted in 34% stating the worst thing about being in school is being picked on (Reid and Ayris, 2011) and 17% being suspended. This would concur with Morewood, Humphrey and Symes, (2011)'s findings that despite the increasing frequency of pupils with ASD in mainstream schools, the educational experience of pupils with ASD is marked with worse outcomes and more difficulties than their peers without ASD.

The frequency of pupils with ASD in the mainstream classroom has increased considerably during the past decade (Emam and Farrwill, 2009). This rise means in reality that every class teacher is likely to have a diagnosed child with ASD in their class at some point in their career as pupils with ASD are more likely to be in mainstream schools (Fombonne, 2005 and Greig, MacKay and Connolly, 2017). Therefore extra support and guidance would be useful for both teacher and pupil.

In order to fulfil the above aims under the 'Equality Act 2010' schools must co-operate with the local authority in assessing what provision is both available and suitable for children with ASD on an individual basis. Schools are required to make

reasonable adjustments to allow all children with ASD, including children with ASD, to access the curriculum alongside their peers without SEN. Ideally this would occur before the child begins school in order to attain auxiliary aids or extra help in the form of a pupil support assistant/teaching assistant. Specific auxiliary aids available to support pupils with ASD are discussed later. This is one of the duties of the designated SENCO (special educational needs co-ordinator) teacher in a primary school. The use of auxiliary aids and extra provision is reliant upon the schools' definition and identification of pupils with SEN.

2.4.8: Definition of educational SEN categories in schools

There are four broad areas of need for pupils with SEN which the DfE recognise as requiring extra support:

1. *Communication and interaction* – SLCN (speech, language and communication needs). Children have difficulty in communicating with others, articulating requirements and understanding others which may vary over time. (Children with ASD are likely to have difficulties in this area which may impact on how they relate to others. Indeed there was a general consensus as mentioned above prior to DSM-5 that communication and interaction difficulties were a defining characteristic of ASD).
2. *Cognition and learning* – these learning difficulties cover a wide range of needs including moderate (MLD) to severe (SLD) including have mobility issues, communicative difficulties and profound/multiple difficulties (PMLD) when severe and complex learning difficulties as well as a physical or sensory impairment is also present. In this area of need children progress at a slower pace than their peers even with appropriate differentiation and may encompass dyslexia, dyscalculia and dyspraxia.
3. *Social, emotional and mental health difficulties* – withdrawn or isolating behaviour or challenging, disruptive or disturbing behaviour. An underlying mental health issue of anxiety or depression, self-harming, substance misuse, eating disorders or other physical symptoms may

be present. Some disorders may include attention deficit disorder, attention deficit hyperactive disorder or attachment disorder. (Social interaction difficulties are an established characteristic of ASD as mentioned above.)

4. *Sensory and/or physical needs* – these difficulties could include vision impairment (VI), hearing impairment (HI), a multi-sensory impairment (MSI) or a physical impairment (PD).

Some children exhibit behaviours which fit into different areas or indeed all areas. For example pupils with ASD may have needs across all areas in which case a detailed assessment of need should take place to ensure the full range of an individual's needs is identified (DfE/DoH, 2014). Pupils' with ASD exhibit a wide range of difficulties which require in turn a wide range of support. Indeed there may be children who have not developed speech (Howlin, 1998) or have additional learning difficulties (Wing, 1991) without any intellectual or linguistic problems.

The recent DfE/DoH (2015) guidance places a great deal of emphasis upon the parental and child voice. Parents must be kept informed of all special educational provision which is being made for their child and are to expect clear outcomes from such provision to be shared and a date for reviewing progress set. A special needs teacher, SENCO, must be appointed in each school to facilitate the provision of all SEN pupils in the school. They organise the support, advice and input of external agencies in addition to supporting the class teacher with SEN provision. The SENCO organises the meetings which parents attend and into which the child's voice is included. With the increased prominence of the child and parental voice the children and their parents have the final decision over which school the child attends, overruling teachers and external specialists. Therefore schools must make adjustments to their provision to allow every pupil to access the curriculum and achieve. It is this provision which is available to pupils with ASD which is the focus of this study.

2.5.1: Social, emotional and behavioural development of primary aged children

Nest we shall consider the ways in which the social, emotional and behavioural development of primary aged pupils grows and the effects of difficulties in these areas. At the heart of the development and maintenance of social expectations and behaviours lies the ability to regulate one's own emotions (Izard, 1971). In order to have a positive human development throughout life to generate 'flourishing', high levels of emotional, psychological and social well-being or functioning are required (Huppert and So, 2013) however only a small number of children are actually flourishing, 25%, (Keyes 2006). In order to achieve this high emotional functioning individuals must be able to understand the emotions of others and being able to read facial expressions (Bassett, Denham and Zinsser, 2012). By possessing these skills a person can interact with others more effectively and behave in a more socially acceptable way in society.

Child development in the area of social, emotional and behavioural functioning usually begins with a child's attachment relationship with his/her mother (De Wolff and van Ijzendoorn, 1997). As the children grow older peer relations play a critical role in children's social and emotional development (Ginsburg et al., 1998). Sharing, turn taking, interaction, understanding the emotions of others are all learnt during the primary age range with peers (Hartup, 1983,1996). When children develop difficulties in these areas of social, emotional and behavioural functioning difficulties during adolescence and adulthood are more likely to occur (Cowen, Pederson, Babijian, Izzo, and Trost, 1973; Kupersmidt and Coie, 1990).

2.5.2: Social, emotional and behavioural functioning difficulties relating to children with ASD

As highlighted by both the DSM-5 and ICD-10's criteria for an ASD diagnosis, it is the absence or difficulty in areas of ***social, emotional and behavioural functioning*** which are the defining and identifying factors in children with ASD and are the cornerstones of an ASD diagnosis. As described in section 2.5.1 competency in these areas results in positive human development however these are the exact areas in which pupils with ASD struggle. It follows therefore that without these skills a pupil with ASD is unable to achieve flourishing and will struggle

in everyday life. There is a wealth of research highlighting the prevalence of social, emotional and behavioural difficulties of children with ASD. Kasari, Chamberlain and Bauminger, (2001) agrees with social, emotional and behavioural difficulties being central to the problems experienced by children with ASD and found that children with ASD have a lower level understanding of socially complex emotions and social understanding of cultural norms and behaviour. Sigman and Ruskin, (1999) concur and note that children with ASD are far less likely to be attentive and therefore unable to react appropriately to the emotions of others compared to their peers without ASD.

The limited emotional ability in communicative and social situations affecting children with ASD result in limited emotional functioning and well-being. Zeman, Cassano, Perry – Parrish and Carisa, (2006) investigated the connection between social, emotional and behavioural functioning and children with ASD. Zeman et al., (2006) found that in order to develop emotionally a child must be able to understand, manage and express their emotions which pupils with ASD are unable to do. If we look at this reversed Chaplin and Cole (2005) and Keenan (2000) found that emotional dysregulation is created by inflexible, inconsistent and unpredictable management of emotions. All of these difficulties are found within the DSM and ICD criteria for ASD diagnosis illustrating the universal difficulties children with ASD have in the area of social, emotional and behavioural functioning.

In addition there is research to suggest that the inability to manage social, emotional and behavioural functioning can result in further areas of difficulty not just the inability to 'flourish'. When a child has difficulty in managing their emotional functioning there follows new difficulties with anxiety, mood and personality disorders and behaviour (Gratz et al., 2009; Hessler and Katz, 2010; Macklem, 2008). It is therefore important to support children in the development of their emotional functioning as difficulties in this area can lead to the problems listed above.

2.5.3: Social, emotional and behavioural functioning difficulties in children with ASD leading to anxiety

Following from previous research (Gratz et al., 2009; Hessler and Katz, 2010; Macklem, 2008) it is clear that when a person is unable to function emotionally and

communicate effectively without difficulties, negative results (negative behaviour) ensues. Indeed this may be compounded when the person is also able to appreciate the society's expectation of him/her as well (Garmezy and Rutter, (1983). There has been some research the results of being unable to achieve a good level of emotional functioning. What are the results of having limited social, emotional and behavioural functioning? As the criteria for an ASD diagnosis from both the DSM-5 and ICD-10 guidelines illustrate, it is the children with ASD who are the more likely to have these results as they have difficulties in precisely these areas. Deater-Deckard, (2001) discussed this idea and found that when children are unable to manage their emotions in a socially acceptable way, signs of depression may become evident. Copeland, Shanahan, Costello and Angold . (2009) and Sanders, Zeman, Poon and Miller (2013)'s work describe how depression can be followed by other mental disorders such as anxiety. This concurs with Strang et al. (2012) who found children with ASD have higher risk of developing depression or anxiety compared to their peers without ASD. Therefore if a child is unable to achieve good emotional functioning through social and communicative interactions the result will likely be depression and then anxiety.

It is therefore established that children with ASD struggle with managing their emotions and that this often leads to depression and anxiety which may produce observable behavioural traits. Unfortunately there has been little research in this area concerning how the levels and kinds of anxiety experienced by children with ASD are being managed in schools today, however there has been some research regarding the place anxiety has within ASD.

South, Rodgers, Boulter and Freason (2014) have investigated the role anxiety plays within the ASD child population. This study identified that children with ASD do indeed have a higher level of anxiety than their peers without ASD. Although the children's' self-reported levels were lower than those reported by their parents there exists a link between higher levels of anxiety and an ASD diagnosis. When investigated further, the role anxiety plays within the ASD child population was developed. South et al., (2014) were interested in the existence of 'Intolerance of Uncertainty' or IU – the risk of developing a significant anxiety. IU was found to be the reason/link why increased levels of anxiety were found in children with ASD. This is perhaps unsurprising as the some of the criteria for an ASD diagnosis

(repetitive movements/insistence on 'sameness') fit comfortably within the IU sphere, however South et al., (2014) concluded that rather than measuring the same thing their study found that IU and anxiety were different and rather 'points towards similar processes being at work' (p. 1398) thereby suggesting that this is a separate mental health problem aside from ASD.

Kerns et al., (2014) also investigated the existence of anxiety within the ASD population to ascertain whether the existence of anxiety is the same as that in a non-ASD population. Kerns et al., (2014) found that anxiety was indeed present and that 'traditional' anxiety disorders were found in the ASD population as in the non-ASD population (although linked more strongly with those with stronger language understanding). This study also found that some of the anxieties found within those with ASD are not mentioned as the criteria for a DSM-5 ASD diagnosis. 'Atypical' anxieties were found to be present in both those with ASD and those without, highlighting how these are 'not necessarily unique' (pp. 2859) to the ASD population. Therefore, in agreement with South et al. (2014) it was found that anxiety is a separate condition from ASD and can occur in both people with and without ASD.

2.5.4: Social and communication functioning difficulties – what these may look like.

As we have seen social difficulties and stereotypical, repetitive behaviour are key characteristics of ASD from both the DSM-5 and ICD-10 criteria for diagnosis. The following is a brief exploration of what these areas may look like.

Social and communicative and emotional skills are essential in life to improve chances of happiness and success (Reivich and Shatte, 2002). On the most basic level each person will require the ability to ask for things which they need and ask for information either verbally or non-verbally. As we grow older and we develop more complex skills such as the ability to maintain conversations and debate or rationalise with others. Most children begin these social and communicative skills very early in life and they are developed throughout childhood and into adulthood. Mrachko and Kaczmarek (2017) cite Wetherby (2006) to describe a child's communication growth during its first year which includes smiling, sounds and gestures. This develops to interacting by use of language in more complex ways, for example through play,

spoken language and imitation (Kohler et al., 2001). The current criteria for an ASD diagnosis using either DSM-5 or ICD-10 both require difficulties to be witnessed within this social and communicative area. Fletcher et al., (2010) continues this thought to discuss how the ability to adapt to an audience using appropriate social language and flexible, fast understanding of a situation may never be achieved by those with ASD. Therefore social and communicative difficulties are one of the core components of ASD. Indeed Goldstein et al. (2014) cited in Mrachko and Kaczmarek (2017) found that children with ASD spend more time in purposeless activity and interacting less frequently with others. Another observable trait was that children with ASD maintain a greater physical distance from peers compared with children without ASD.

Harrop, Gulsrud and Kasari (2015) investigated the difference in social and communicative skills between girls and boys with ASD. Although they were interested in comparing the two genders, which is not a focus of this current study, the methods used highlight how children with ASD's social and communicative development can be observed. Their study illustrates how the difficulties in these functions can express themselves. The variables listed below within this study represent the social and communicative behaviours frequently displayed by children with ASD and which could be targeted for intervention (Harrop et al., (2015), Drew, Baird, Baron-Cohen, Cox and Slonims (2002), Kasari et al. (2006) and Landa, Holman, O'Neill and Stuart (2011). The two measures used were the 'Structured Play Assessment' (SPA) and the 'Early Social Communication Scales' (ESCS).

When the SPA is administered an examiner observes a child for twenty minutes playing with five sets of toys at a table but does not show the child how to play. The actions of the child are recorded to find out the child's level of play complexity or developmental play skills levels. The SPA highlights the following developmental play skill levels in four categories in which children with ASD have difficulties and would not be able to achieve (edited from Harrop et al., 2015):

- i. *Simple* – eg. all objects treated alike
- ii. *Combination* – eg. combinations of objects that are simple and nonspecific (e.g. puts puzzle pieces into a nesting cup)
- iii. *Presymbolic play* – eg. uses object in a way that indicates a pretend quality (e.g. brings utensil to mouth)

- iv. *Symbolic play* – eg. pretends to use something that is not there (e.g. drinks “water” from a cup)

The ESCS measures verbal and non-verbal communication skills cited Mundy et al. 2003 in Harrop et al. (2015). Again a set of toys are displayed are in view of the child but out of reach and the examiner gives the toys one at a time to the child. The ESCS also takes twenty minutes. The ESCS highlights the four main areas of attention and behavioural difficulties. These are areas in which children with ASD may have observable difficulties (edited from Mundy et al. (2003) cited in Harrop et al., 2015):

- i. *Initiating joint attention (IJA)* – eye contact, moves eyes between person and object, shares
- ii. *Responds to joint attention (RJA)* – turns head and eyes to object shown
- iii. *Initiate behavioural requesting (IBR)* – eye contact while reaching or when item is out of reach
- iv. *Responds to behavioural requesting (IBR)* – correct response to verbal request or gesture

2.5.5: Behavioural functioning difficulties – what these may look like.

Behavioural difficulties, (repetition, restricted or stereotyped behaviour), are also necessary for an ASD diagnosis using both the DSM-5 and ICD-10 criteria. They can include the following, adherence of routines, repetitive body or sensory movements and obsession over objects (Richler, 2007). Harrop et al. (2015) cites Turner (1999) to describe how these observable behaviours can be divided into lower and higher order behaviours:

- lower order: repetitive motor actions and physical and/or sensory manipulation of objects
- higher order: presence of routines, an insistence on sameness and circumscribed interests

Harrop et al. (2015) describes how all children can be observed engaging in repetitive, restricted stereotypical behaviour however for the vast majority of children

this is simply a way in which to gain experience and proficiency in a particular area and as soon as this is achieved this behaviour stops. Children with ASD however differ from this as these types of behaviour are more frequent and have a greater hold over the children and are therefore more easily observable. The behaviours do not subside as time passes and begin to affect the child's overall development.

The Repetitive Behaviour Questionnaire (RBQ) highlights the different areas of observable behaviour in which children with ASD may struggle and may be witnessed:

1. operate light switches, taps, the toilet flush etc. repeatedly when it is not necessary to do so
2. arrange toys or other items in rows or patterns
3. repeatedly fiddle with toys or other items
4. touch parts of his/her body or clothing repeatedly
5. attached to anything in particular
6. obsessively collect or hoard items of any sort
7. spin him/herself around and around
8. rock backwards and forwards, or side to side, either when sitting or when standing
9. bang his/her head occasionally or repetitively
10. pace or move around repetitively
11. make repetitive hand and/or finger movements
12. make other repetitive body movements
13. injure him/herself
14. insist on things about the house staying the same
15. insist on other items being put out, kept or stored in the same way
16. play the same music, game or video, or read the same book repeatedly
17. insist on using the same objects or items in any other situation
18. insist on wearing the same clothes or refuses to wear new clothes
19. insist that certain items of clothing must always be worn or worn in the same situation or in the same way
20. insist on eating the same foods, or a very small range of foods, at every meal
21. insist on moving or travelling by the same route

22. react if any changes are made to his/her surroundings at home
23. any aspects of routine that he/she insists must remain the same
24. make rituals out of everyday activities such as eating, dressing, getting in the car, walking upstairs etc.
25. have any rituals that are linked to particular occasions or places
26. react his/her daily routine is changed
27. 'echo' or repeat what other people say
28. say the same things, or make the same noises, repeatedly
29. talk about the same topic over and over again

(edited from Newcastle University Research, 2015)

It is these social and communicative and behavioural difficulties which can negatively affect a child with ASD as described above and can often allow depression, anxiety and stress to develop. Therefore the next section will highlight the links between stress and anxiety these will be explored from the viewpoint and of both a child without ASD and a child with ASD.

2.5.6: Links between social, emotional and behavioural difficulties and stress and anxiety

The difficulties in the areas of social, emotional and behavioural which are experienced by children with ASD can result in stress and anxiety becoming evident, Deater-Deckard (2001), Sanders et al. (2013) and Copeland et al. (2009). Stress and anxiety are different. In the case of primary aged children stress may occur when a child feels unable to cope and may be associated with schooling and attempting to achieve the expected outcomes and conform, both academically and socially (Garnezy and Rutter (1983). When a person is under pressure it affects his/her mind and body. It is also noted that this stress releases adrenaline which when present for a sustained period, gives rise to depression. A person's blood pressure may also rise, heartbeat quicken, breathing increases and sweating may occur (NHS, 2015). Therefore stress is described as a physical response when the body feels that it is in difficulty or is threatened.

When the perceived threat has passed generally these physical symptoms dissipate however in a high level of stress situation, a negative effect remain (Health

Status, 2015). Anxiety is the effect which remains. Therefore anxiety follows a stressful situation when a threat is experienced with which is more than a person can cope (Lazarus and Folkman, 1984). Anxiety is a feeling of unease, worry or fear (NHS, 2018) which can overcome all other emotions (Health Status, 2015). Whereas stress is caused at a specific period of time when a person feels that they cannot cope, anxiety is what remains after the cause of the stress has passed.

Teachers first encounter this anxiety originating from social, emotional or behavioural difficulties and lack of coping at primary level. Children with anxiety are noticed first by their teacher and within the group of children with ASD it is suggested that the existence of anxiety has resulted from stress in the classroom environment which followed social, emotional and behavioural difficulties. Gratz et al. (2009), Hessler et al. (2010) and Mackelm (2008) concur. The behavioural functioning difficulties of children with ASD are directly linked to stress Prior and Ozonoff, (1998). Troajman, Spitz, Corinne, Carlier and Roubertoux (1998) take a further step and conclude that it is possible to identify stress and anxiety to be at the heart of ASD. With this in mind it is important to understand how the results of different social, emotional and behavioural functional difficulties can be measured. Stress is difficult to measure however anxiety can be measured using an established scale. As described above stress is physical reaction often incorporating higher blood pressure, faster heart beats etc which would be difficult to measure in a classroom setting. Accurate blood pressure monitoring would require some medical training and elevated heart beats could be a result from a number of different activities, eg. playtime, P.E. lesson etc. Also not everybody reacts in the same way - an unelevated heart beat might not mean you are not stressed (Health Status, 2015). Measuring the stress levels of children is not therefore reliable. Therefore in a classroom environment the result of stress, anxiety, is what is often measured through the use of established surveys.

2.5.7: Specific research regarding stress and anxiety surrounding children with ASD

Findings by the Center for Disease Control and Prevention's National Health and Nutrition Examination Survey (NHANES, 2012) were analysed it was found that

13.1% of children between 8 – 15 in the US experienced mental health problems of which 1% was due to stress. Therefore childhood stress is not a rare occurrence within the general population. Within the ASD group of people the level of stress and anxiety may stem from their difficulties in dealing with social situations, communication issues or sensory changes to the environment (Howlin, 1998). Indeed Hallet (2013) found that children with ASD have elevated stress in comparison to the general population. (In this context, the term 'stress' refers only to a stress with significant negative consequences.) Stress produces numerous physical and mental symptoms which can include physical health decline as well as depression which is why finding a way in which to reduce stress in children with ASD is so important.

Lazarus and Folkman (1984) explored stress and anxiety. The Transactional Model highlights how the social, emotional and behavioural difficulties the pupils with ASD experience can lead to anxiety and stress as this occurs when the person cannot manage or cope with other people or their environment. The feeling of pressure to conform and follow school rules and expectations as experienced by children with ASD contributes to the stress and anxiety felt by children with ASD in school (Garmezy and Rutter (1983). Indeed Strang et al. (2011)'s study concurs with this statement as it found that children with ASD had far higher rates of anxiety and depression.

Although there have been several research projects into how the result of social, emotional and behavioural functional difficulties, stress, is experienced by parents and families of children with ASD (Mak et al., 2006, Schaaf, Toth-Cohen, Johnson, Outten and Beneides2011, Gray et al., 2008 and Duarte et al., 2005) and research from a clinical professional point of view, the actual level of stress of the children themselves and the ways in which this stress is managed in the UK has not yet been approached fully. As Groden, Cautela, Price and Berryman (1994) and Groden, Baron and Groden (2006) found that children with ASD are far more likely to experience stress due to their communication, social and behavioural functional difficulties, this is an important area of research.

An example of previously conducted research into the anxiety felt by family member of an ASD child can be found in Schaaf et al. (2011). Schaaf et al. (2011) illustrated how the presence of a child with ASD in the family has wide repercussions

in daily life. Everything from getting up in the morning to bedtime routines might be affected by the sensory problems of the child with ASD. The routines which the child with ASD finds so comforting begin to become rituals due to the inflexibility of the child (Larson, 2006). One example might be the only way to get dressed requires the clothes to be laid out in the same way each day. Parents create routines, structures to which the child responds positively, to decrease the sensory problems combined with selecting activities and situations the child likes. Naturally each strategy must be matched to the child however this can become more difficult when outside the familiarity of the home. These strategies have also been recommended for schools however there are practical limits to how far this can be employed in schools. In schools there are usually twenty nine other pupils and it is difficult to always follow specific routines or avoid certain situations which may stress one child. Being outside the familiarity of the home, where everything stands a better chance of being individualised, can be a stressful situations for a child with ASD especially as the schools day may often change. This highlights the problems which schools face in assisting children with ASD. Indeed Schaaf et al. (2011) found this when he discovered that environments other than the home resulted in stress and anxiety for the child as well as when time restraints occur. As both of these occur when the child attends school then it follows that the level of stress experienced by the child increases at school.

In Duarte et al.(2005) the focus was upon investigating maternal stress only but they do concur with Schaaf et al. (2011) concerning the presence of a child with ASD causing repercussions in the home. Indeed they go further to state that the primary factor for stress in mothers was having a child with ASD. Although the age of the mother and whether they worked outside the home were also issues, the severity of ASD, ie the detachment from others, was a significant factor. Therefore it is evident that ASD has a significant effect on the lives of the family of children with ASD which in turn affects the children themselves as found in Calder, Hill and Pellicano (2012).

Although Calder et al.'s work (2012) focused on what friendship means to children with ASD it also illustrated that pupils with ASD do experience stress and why and in which contexts this may occur. Using quantitative, qualitative and social networks measures to obtain data they found that although children with ASD,

regardless of ability, can and do form friendships and indeed are happy with their results, their teachers and mothers are not. Even though the adults have the child's best interests at heart by encouraging or forcing interactions they cause the children to become overwhelmed, an experience which they children find not only deeply uncomfortable but also at times distressing which results in stress and problems in school. Woodbury-Smith et al (2005) argue that this continues to adulthood where unlawful behaviour is in some way a consequence of ASD. The report concludes with the question of how best can we intervene – something in which this study is interested. There are many new pieces of equipment and assisting technologies (Lang et al. 2014) which can be employed to assist special need, including children with ASD. It would be interesting to investigate if any external device, piece of equipment or strategy is used with children with ASD to reduce stress and anxiety in English primary schools and whether or not these are effective. The existence of these technologies is explored later in this chapter, but it is interesting to explore whether any of these technologies are actually being employed in contemporary primary schools.

2.5.8: Links between stress and anxiety and ASD

As we have seen above there is a link between not coping emotionally and managing social and communicative situations and the development of anxiety and depression. Lazarus and Folkman's (1984) describes how at the start there is a primary appraisal where a situation is acknowledged and defined as threatening. Everyone has different ideas and reactions of what is threatening which maybe cognitive, emotional etc in nature. After this acknowledgement people are divided in a secondary appraisal. When judging whether they can cope, those who cannot generate anxiety as a final response. Due to the difficulties listed in section 2.4.2 and 2.4.3, children with ASD are likely to experience more threat and can have problems coping with the perceived threat. This can result in challenging behaviour often observed in schools.

In addition to the links between communication and social difficulties and anxiety within these three areas listed above it is also possible to see another way of describing the links between ASD and not coping. Stress can occur when something major changes in the environment – the stimulus factor. This can be a major issue

for people with ASD (DSM-5/ICD-10) and therefore increase the likelihood of feeling threatened. One of the major characteristics of ASD is the negative effect change in routine can have which makes children with ASD especially susceptible to experiencing stress. Sigman and Ruskin's (1999) 'Transactional Model' also illustrates this point. They found that a major source of stress for children with ASD occurs when the person cannot cope with their interaction in their environment. The response factor occurs when a stimulus has affected the person. The response to a stimulus differs for different people however people with ASD are more likely to have a response which is stressful such as flapping or other repetitive body movements which are the outward expressions of a person with ASD (Humphrey and Parkinson, 2006). Sometimes these can even be harmful to themselves. The flapping or echolalia could be interpreted as clear expressions of a child with ASD feeling threatened and being unable to cope with the stresses being experienced (Tracey, Galialisatos and Graff, 2003 and Guillot, Furnace and Water, 2001). Ekblad and Pfuhl (2017) however believe that these behaviours may serve another purpose – one of non-verbal communication and therefore should be studied as a means of gauging a non-verbal person's feelings. The relational factor can occur when two different variables interact such as the combination of social and emotional factors. As discussed above children with ASD find social interaction very difficult. The ability to read others and to solve problems or disagreements is impaired and the uncertainty that this can bring again creates a stressful situation. This stress may be expressed through difficulty concentrating, disturbed sleep or panic attacks. It is therefore clear that although any person may experience stress, it is children with ASD who due to the characteristics of ASD, are more susceptible and inclined to do so.

2.5.9: How to label the types of social, emotional and behavioural difficulties a pupil with ASD experiences and how to measure the anxiety and depression which follow

It has been described above that the social, emotional and behavioural difficulties pursuant to an ASD diagnosis lead to depression and later possible anxiety and that stress is the precursor to anxiety.

There are ways in which some people are able to successfully manage stress. Managing stress and anxiety are some of the ways to increase the chances of a happier and more successful life in modern society (Susic, 2013) and therefore it is very important for children with ASD to be able to manage their anxieties. There are many practical management techniques available which may help an individual reduce their levels and promote general well-being, however evaluating the effectiveness of various stress management techniques can be difficult. Stress balls, physical exercise, social activity, cognitive therapy, deep breathing, relaxation techniques, spending time in nature etc (Spence, Barnett, Lindon, Ramsden and Taenzer 1999) are also recommendations. This, together with the use of assistive technologies, are some techniques which may be used with children with ASD as described later in section 2.6.5.

Therefore if children with ASD experience social, emotional and behavioural difficulties then stress and anxiety may develop. The Strengths and Difficulties Questionnaire (SDQ) provides a broad overview of the difficulties of the pupils and the Revised Children's Anxiety and Depression Scale (RCADS) provides a clear description of the types of anxiety and depression pupils with ASD experience in their schools. These will be discussed next.

2.5.10: Established measurement of social, emotional and behavioural difficulties including anxiety

Strengths and Difficulties Questionnaire (SDQ)

At the start of this study it was planned to investigate whether children with ASD experience difficulties in their school setting and then later what these difficulties may look like with regards to anxiety and depression. Therefore it was necessary to find a survey which would provide a broad overview of the types of difficulty a pupil may experience. The SDQ is an established survey which is familiar to teachers. As a teacher myself I have been asked to complete SDQ's for pupils in my class in order for the SENCO to investigate areas of concern the pupil in question may be experiencing. It was therefore felt that other teachers may also be familiar with this survey and therefore would be more confident in completing it. The SDQ also allows the answers to the broad range of difficulties a pupil may be experiencing

to be investigated thoroughly and was therefore a most suitable choice to be employed in this study. Next we shall examine the SDQ in more detail.

The SDQ is a tool for the measurement of children's difficulties. The SDQ is a closed questionnaire where the participants select a response from those given on a three point Likert agree-disagree scale. The Likert scale, (Likert, 1932) is a psychometric rating scale commonly involved in research and is the most widely used approach to scaling responses in survey research (Jamieson, 2004). The participants are asked to specify their level of agreement or disagreement on a symmetric agree-disagree scale for a series of statements – not sure, somewhat true and certainly true. There are 25 items to answer on psychological attributes. All versions of the SDQ, for teachers and parents in this study, ask about the 25 attributes, some are positive and others negative. Within the 3 – 16 year bracket the SDQ is able to identify psychosocial problems in four areas:

- Emotional Problems
- Conduct Problems
- Hyperactivity/inattention Problems
- Peer Problems

These four areas can be added together to provide a total difficulties score. In addition a fifth area of difficulty can also be generated:

- Prosocial Behaviour

The SDQ is a well-established and reliable measurement tool and has been used in many research studies. It is very well-established and has been found to have a strong internal consistency (mean Cronbach α : .73) in tests by Goodman, R. (2001). Perez Algorta, Lamont Dodd, Stringaris and Youngstrom (2016) investigated the efficiency of the SDQ with a focus on children with ADHD and found that for parents it was a valid tool. Goodman et al. (2000) overviewed the SDQ and found that the SDQ was so useful in diagnosing difficulties that it would 'potentially increase the detection of child psychiatric disorders, thereby improving access to effective treatments' (page 1). In other studies the validity and reliability have also been found to be satisfactory. This was found to be true for use with both adults and children (Mieloo et al. (2012). Muris, Meesters and Van den Berg, (2003) also explored the reliability and validity of the SDQ and also found that the validity of both

the adult and child versions was good and therefore that the SDQ is useful in identifying the different psychopathological difficulties in children.

The Revised Children's Anxiety and Depression Scale (RCADS)

This study was concerned with the levels of anxiety experienced by children with ASD in their educational settings. Therefore a suitable scale with which to measure this was also sought. The Revised Children's Anxiety and Depression Scale (RCADS) was developed based on both the Spence Children's Anxiety Scale (SCAS, 1997) and DSM-4 Major Depression Disorder (MDD) symptoms. It was decided not to use the Spence Children's Anxiety Scale as although it does score anxiety (the focus of this study) it was considered prudent to use the most up to date scale available. The RCADS is a revised version of the Spence Scale and also encompassed the major depression symptoms as described below. Some new items related to general anxiety were also added (Child First website, 2018). The Spence Children's Anxiety Scale is a questionnaire designed for children between the ages of 8 and 15. This scale was designed to identify the following:

- Separation anxiety
- Social phobia
- Obsessive-compulsive disorder
- Panic disorder/agoraphobia
- Personal injury fears
- Generalised anxiety

When the RCADS was developed the DSM-4 Major Depression Disorder (MDD) symptoms list was also used as a tool in addition to the Spencer Children's Anxiety Scale (SCAS, 1997) as the DSM-5 had not be developed at that time. The DSM-4 criteria for Major Depression Disorder (MDD) was as follows. To generate a diagnosis of MDD at least five of the nine symptoms listed below needed to be present nearly every day:

- Depressed mood or irritable (eg. feels sad or empty or to others appears tearful)
- Decreased interest or pleasure (in most activities during most of the day)
- Significant weight changes (5%) or change in appetite

- Change in sleep (including insomnia or hypersomnia)
- Change in activity (psychomotor agitation)
- Fatigue or loss of energy
- Feelings of guilt/worthlessness
- Concentration (diminished ability to think or concentrate or indecisiveness)
- Suicidality

The RCADS was developed from both the criteria for SCAS and the DSM-4 MDD. The RCADS contains forty-seven questions which cover the following areas:

- Separation Anxiety disorder (SAD)
- Social Phobia (SP)
- Generalised Anxiety Disorder (GAD)
- Panic Disorder (PD)
- Obsessive Compulsive Disorder (OCD)
- Major Depressive Disorder (MDD)

It is also possible to generate a total anxiety score from the five anxiety scales and a total internalising score from all six areas. This survey has a relevant pupil version so this can be employed alongside a survey used for parents and teachers. It has been tested and has been found to be a valid assessment tool for identifying anxiety disorders in children (Esbjorn, Somhovd, Turnstedt and Reinholdt-Dunne, 2012).

This survey has been employed by previous researchers (Hallett, 2013) as a suitable survey which is accessible for primary aged children when previously used in the UK. Hallett (2013) found that this scale has resulted in a moderate to strong internal consistency (Total Anxiety measure ($\alpha = .90 - .93$)).

Since the development of the RCADS has been adapted specifically for use with children with ASD (Rodgers, et al. (2016)). Although the use of the RCADS with children with ASD is considered suitable (Wigam et al., (2014) Rodgers et al. (2016) adapted the RCADS to include the levels of difficulty in uncertainty, sensory hypersensitivities and phobias. This new scale, ASC-ASD, was found to be a valid measure of the levels of anxiety in children with ASD (Rodgers. et al. (2016)).

The strengths and limitations of using the SDQ and the RCADS with pupils have been explored by Wolpert, Cheng and Deighton, (2015). It was found that both scales are useful. The SDQ has been widely used by CAMHS in the United Kingdom for many years and although it provides broad clinical diagnoses it does not provide a depth of detail. The newer RCADS helps to identify more specific anxiety and depression based problems. Below in figure 3 are the edited results of Wolpert et al. (2015) concerning the reliability and validity of these scales.

Figure 3: Reliability and validity of SDQ and RCADS (from Wolpert et al., 2015)

"This image has been removed by the author of this thesis/dissertation for copyright reasons"

As noted above the use of the RCADS with pupils with ASD is also supported, for example by the findings of Sterling et al., (2015). This work on the validity of the RCADS specifically within a young ASD population found that it was useful and is supported for use within this group. There therefore was a choice between using the RCADS or the new adapted ASC – ASD. When the data collection began in this study the ASC – ASD had not been developed and therefore the RCADS was employed. Although the RCADS had been adapted for use with children with ASD, the RCADS itself was suitable for use with this group of children. The RCADS provided a range of anxiety measures which were suitable and useful in answering

the research questions. Therefore the findings of Sterling et al., (2015) to recommend the RCADS's use with children with ASD helped to confirm that the RCADS would be a useful tool to employ to generate the reliable data required for this study.

2.6.1: Managing inclusive classrooms

We will now consider how a contemporary English primary classroom looks when following the inclusion guidance for the government as described above. Learning to direct the learning of a classroom of children is a difficult task for the novice teacher, however delivering a lesson is only part of teaching. Actual classroom management, management of the children and other adults is an important, yet challenging aspect of a teacher's job (Coffee and Kratochwill, 2013; Reinke, Stormont and Herman, 2011).

Inclusive classrooms are classrooms where access to the curriculum and learning are equal to all. Every learner has the ability to access the teacher's instruction (Englebrecht, Savolainen, Nel, Koskela and Okkolin, 2017). As we have seen above, the contemporary DfE/DoH, (2015) guidance assures all parents that schools are required to make reasonable changes to facilitate all the pupils in their care to enable them to continue their education at their local school. Indeed Englebrecht et al. (2017) describes how the worldwide trend towards inclusive education has resulted in students being increasingly placed in general-education classrooms, despite their having a wide diverse range of educational needs. This implies that teachers now have to widen their classroom management styles in order to accommodate a wide range of learning abilities. Englebrecht et al. (2017) cites (Ferri, 2015) in identifying inclusive classrooms are ones where each pupil belongs is nurtured and educated and these values are at their hearts. Indeed Englebrecht et al. (2017) points out that inclusive education not only allows access but also champions acceptance and participation, and the promise of quality education for all.

During a teacher's training, classroom management is discussed and observed in a variety of classes. There are a wide range of strategies and approaches which may be used to support and children and promote inclusivity. These support strategies are often overwhelming in numbers and in the promises

they hold (Gray et al., 2008 (citing Nickel, 1996 and Tanguary, 2000)). The Incredible Years Teacher Classroom Management Programme (IY-TCM) is an example of the support available and how research strategies can be transferred to a mainstream classroom. Hickey, McGilloway, Hyland (2017) describe how this programme focusses on the established ideals of praise, encouragement and incentives when observing positive child behaviours. Ignoring negative classroom behaviour and non-coercive disciplining techniques are also explained as a way to decrease the frequency of unwanted classroom behaviour. Hickey et al. (2017) point out that these techniques have been long established and do promote appropriate behaviour while reducing disruptive behaviour (Marzano, Marzano and Pickering, 2003; Oliver, Wehby and Daniel, 2011; Raver, Jones and Li-Grining, 2008).

The MERLOT pedagogy runs alongside these ideas and believes that educators need to learn about student learning styles in order to understand how to reach and engage all of their students (Pedagogy Community, 2018). This is particularly true of the changing population of primary classrooms today. The rise in pupils with ASD creates a new need in the classroom for a more personalised approach to engaging pupils with the curriculum. The development of an inclusive classroom is essential in order for all SEN pupils, including those with ASD, to experience an effective learning environment.

2.6.2: Managing inclusive classrooms focusing on pupils with SEN and ASD

In addition to the general advice and guidance above for all types of general inclusion and the creation of an inclusive learning environment, there are certain aspects of classroom provision which can be adapted or provided with pupils with SEN and specifically ASD in mind.

As we have seen children diagnosed with ASD have a range of social, communicative and behavioural difficulties affecting their functioning at school through anxiety and possible depression. It is therefore important to find ways in which to assist these pupils especially as Jones et al. (2013) has found how pupils with disabilities are far more likely to be both suspended from their educational settings and drop out entirely from education. The development of strategies to improve inclusivity in classrooms to assist teachers would also help any negative

feelings teachers may associate with teaching pupils with SEN or ASD. Jones, Weber and McLaughlin (2013) highlights that many teachers are unable or unwilling to approach these pupils with the explicit instructions they require to achieve skills. Indeed Moores-Abdool, (2010) expands on this and states that many teachers lower expectations for these pupils attending mainstream schools instead of altering their teaching strategies and approaches in order to address individual needs. This may be due to teachers feeling intimidated or resentful of the disruption SEN pupils may bring to a classroom when they do not have training in this area (Avramidis, Bayliss, and Burden, 2010). Jones et al. (2013) found this was true of the inclusion of pupils with ASD. The following sections will now examine the different support approaches and strategies which are currently available to classroom teachers. They all have the aim of creating a more inclusive classroom where all pupils, including those with ASD can achieve and attain. These approaches and resources are of particular use to pupils with ASD as they seek to address the areas in which pupils with ASD often struggle.

2.6.3: Processes to assist pupils with ASD

In order to support pupils with ASD in educational settings different assistive technologies and approaches have been developed. Whether these are in widespread use is later investigated in this study. The use of different strategies or resources provide opportunities for stressful situations developing to be minimalised. These approaches and resources have the aim of reducing stress and anxiety by breaking down barriers between how the pupil perceives the world and the rest of the world's expectations. By attempting to teach pupils with ASD acceptable ways to interact with others and, for children for whom social communication is difficult, supportive ways in which they can share their feelings, it is hoped that their general stress levels will fall and their happiness and success in school increase. Although there are many other interventions (Research Autism website) which are available to support children with ASD, this study is only concerned with strategies which can be used within educational settings.

Before any approaches or assistive technologies are suggested every school should begin a four-part cycle to assess whether extra support is required which is followed by ensuring the provision in place is effective (DfE/DoH, 2015).

The four-part cycle

Assess – an analysis of the child’s needs is undertaken by the class teacher and SENCO using previous and current progress and attainment, parental views and any external agency advice. This assessment must be reviewed regularly and if professional health or social services staff are required this must be agreed upon by the parents.

Plan – after the decision to label a child SEN has been taken, the parents must be informed. All interventions, adjustments and support for the child must be agreed with the parents and the child and be chosen as a way to meet the outcomes identified for the pupil.

Do – the class teacher remains responsible for the child with SEN even when they are working with an assistant away from the class. The SENCO should support the class teacher with further assessment and the implementation of new strategies.

Review – at the agreed date the effectiveness of the provision should be assessed. All those involved should have their views heard and the next steps planned. An EHC plan must be reviewed every 12 months with the local authority.

This four-part cycle therefore clarifies the needs of the pupils and the strategies to be employed. Sections 2.6.4 and 2.6.5 will explain and explore the strategies which have been developed to support pupils.

2.6.4: Types of approaches including assistive technologies – preventative and restorative

In addition to using various assistive technologies, teaching approaches may include the use of other strategies. We will now discuss the other strategies available. Teaching approaches involve various different elements. More generally speaking a teacher requires a teaching knowledge base which may include not only a teacher’s knowledge of the curriculum but also an understanding of the learning

process and understanding of the learners themselves (Lewis and Norwich, 2000). There is not any single teaching approach that is effective all the time for all learners (Killen, 2006). A teacher's understanding of a child's needs and characteristics may be evidenced in the tone of voice, praise, team teaching and discussion strategies (MERLOT Pedagogy) some of which may be seen in the observations of this study. may have all been seen during this study.

Teaching approaches may be preventive or remedial/responsive in nature. Preventive approaches may mirror the work of the 'Triple P' programme used to support children with ASD in their homes in Australia (Sanders, 1999) as they attempt to understand the child's difficulties and prevent them before teaching begins. This may be seen in the following areas: formation of schedules (Bryan and Gast, 2000), following routines/procedures, priming (talking about what will happen in the day), developing work on the child's special interest and different representations of information (Denning and Moody, 2013). Responsive approaches are corrective in nature and are applied after a negative event has occurred. Examples of this type of approach include positive reinforcement of behaviour, explanations and rewards (Leach and Duffy, 2009).

Assistive technologies are any pieces of equipment which make access to the curriculum easier for pupils such as visual timetables, stress balls, computer programmes, pictorial prompts, work stations for example. They have the aim of achieving a better quality of life for an individual by reducing the impact of their disability (Lang et al., 2014 citing Bryant, Bryant, Shihand Seok, 2010 and Reichle,2011). There are three different types of assisted technology which can be used to particularly support pupils with ASD–

1. Speech generating devices for communication difficulties
2. Social skills development
3. Living skills development (Lang et al., 2014)

The different strategies and technologies which are available to primary schools in England now follows.

2.6.5: What are assistive technologies? – Self-monitoring and consequence based

Just as schools are facing new challenges through catering for children with more complex medical conditions and training for staff provided (Porter, Bierle, Dietrich and Palfrey, 1991), due to the rise in frequency of ASD, schools are also being challenged to support pupils with ASD with in different ways including through the use of assistive technologies. Lancioni, Signfoos, O'Reilly and Singh (2014) has investigated some assistive technologies which are currently employed in the US for many disabilities including, although not limited to, brain disorders, communication disorders, visual impairments and ASD. Hoffman (2013) also investigated support approaches for pupils with SEN in schools however this work was concerning New Zealand. Although there has not been any research in this area in the U.K. Hoffman (2013) and Lancioni et al. (2014)'s works still provide a useful into the current approaches elsewhere in the world.

Assistive technologies are defined as any commercial or customised device which assists people to achieving a better quality of life by reducing the impact of their disability (Bryant et al. 2010 and Reichle 2011). Examples of these assistive technologies, which will be discussed later, can range from simple laminated picture cards to smartphones. In the educational setting the main approach has been to use technology to increase behaviours that are incompatible with problem behaviour. Through the introduction of different equipment it is hoped that the child will find communication of his/her needs easier to manage and their anxiety and behaviour will be reduced. Lancioni et al. (2014) states that the use of these strategies may be self – monitoring or consequence based.

Self-monitoring is an educational goal as it allow pupils to become more independent who are able to manage their own emotions and behaviours without the assistance or interference of others. This is especially important with many ASD pupils as it is an area with which they have difficulty. Self-monitoring techniques (Lancioni, 2014) can range from low level technologies, ie the use of pen and paper (Rafferty 2012) to high level, for example use of iPads (Soares, Vannest and Harrison 2009). Rafferty (2012) has an interest in self-monitoring procedures and has conducted research into this area several times. She believes that:

'In general education classrooms, teachers are facing an increasingly diverse population of students with an array of needs. It is not feasible for a teacher to constantly manage a student's behavior. Add 20 to 30 children to the equation and the task becomes daunting' (p.51).

Rafferty found that once pupils were taught how to self-monitor themselves, they were on their way to self-regulating their behaviours. Rafferty found that even those who have cognitive or behavioral disabilities can successfully learn to use and benefit from these self-monitoring interventions. A variety of social and academic behaviours can be addressed in this way including:

- i. attention to a task
- ii. academic productivity
- iii. academic accuracy
- iv. homework completion
- v. disruptive behaviour
- vi. various social behaviours
- vii. peer communication
- viii. play

Consequence based support is often seen to support many children in schools, not only those with additional needs. Consequence based support maybe explained by either verbal comments, including change of the teacher's tone, (which also act to increase communication skills) or picture support. Either way there are direct and immediate consequences if the unwanted behaviour continue.

2.6.6: Types of support focusing on specific areas of difficulty

We will now discuss different types of support which focus on specific areas of difficulty. It has been established that children with SEN may find it very difficult to retain information from the school curriculum (Wilson, 2011). This can result in stress for the child and therefore schools are becoming equipped with different approaches to use different types of assistive technologies in order to attempt to support these pupils. Although Wilson acknowledges the presence of these assistive technologies in schools, she states that the difficulty of incorporating these

into a lesson and the time this would require, often results in their lack of usage. Wilson therefore advocates the use of familiar technology in the classroom such as video games or virtual technology.

There are three general types of assistive technologies which can be used to help in three overarching different areas specifically for pupils with ASD. These aim to impact on the negative behaviour of pupils which are the result of anxiety:

1. Speech generating devices for communication difficulties
2. Social skills development
3. Living skills development (Lang et al 2014).

Lang et al. (2014) state that communication problems are more likely to result in problems in the classroom for pupils with ASD. Rao, Beidel and Murray, (2008) and White, Koenig and Scahill, (2007) are cited Lancioni et al., (2004) as evidence that the emotional and social deficits are experienced by many people with ASD and result in isolation, underachievement and bullying. It would therefore be very beneficial for the future lives of pupils with ASD to have ways in which to manage their anxiety from primary age.

At present there is a lack of information and research regarding which assistive technologies, approaches and strategies are currently in use in contemporary UK primary schools, although as described later there has been some research completed in this area concerning New Zealand and the US. There is even less research concerned with the critical evaluation of these approaches or the perceived usefulness to either the pupil or teacher. Therefore this thesis will continue with a brief overview of different approaches, strategies and assistive technologies which are currently available in the UK and, where there is any critical evaluation of these practices, will include these.

The following approaches have been divided into the four areas listed above – communication, social and living skill development. The specific approaches described below were selected as it is possible that they may be observed and employed in a UK classroom. Some of the following approaches were already known, if only by name, to the researcher and others were completely new. They all are available in the UK however some, as explained later, are highly specialised and realistically believed to only be observed in teachers with a higher level of training in

SEN or ASD. Firstly approaches used to improve social communication will be explored.

i. Social communication devices

Within the classroom AAC (aided augmentative and alternative communication) tools are employed when communication skills require developing which helps to lower the anxiety of pupils who finding communicating orally difficult, explored in depth by Lang et al. (2014). Weitz (1997) agrees that communication devices are important as 61% of people with ASD have failed to develop speech altogether. This figure is surprisingly very high maybe due in part to the narrowing of the definition. As knowledge of other disorders broaden, children who were once included in the ASD bracket may be moved and therefore this number is now less. Even those with Asperger's Syndrome may have speech problems as they either struggle to communicate effectively, remain on preferred topics, or have unusual reactions during conversations or experience anxiety when speaking (Scheuermann and Webber 2002 cited in Lang et al. 2014). Lang et al. (2014) also directs us to the work of Sigafos, O'Reilly, Schlosser and Lancioni 2007). Sigafos et al. (2007) mentions echolalia (the repeating of words verbatim) as a common feature of people with ASD which as a class teacher I have noticed is an aspect of many pupils with ASD. As the National Research Council found in 2002, problems with communication increase the likelihood of a person developing challenging behaviour, employment opportunities, community inclusion and overall quality of life. With these effects different assistive technologies have been developed to assist children with ASD in the classroom.

The company 'Speechmark' have developed various different assistive technologies to support this social communication difficulty in the UK primary classroom setting. 'Emotion ColorCards' are a selection of 48 picture cards depicting different feelings from anger to sadness, joy to fear. They are useful to help the child to develop self-expression in the classroom. When used in conjunction with a pupil support assistant they are designed to aid the child in both expressing his/her own feelings as well as recognising these facial expressions and postures in others. The Picture Exchange Communication System (PECS) has been

used to develop social interactions (Bondy and Frost, 2002) whereby pupils are asked to select a picture illustrating their needs. Charlop-Christy, Carpenter, LeBlanc and Kellet (2002) (both cited in Lang et al. 2014) have evaluated this and noted that this also had the added benefit of improving speech. Pierce and Schreibman (1994) also had favourable results and concurs with these positive results

Some pupils with SEN are allocated a pupil support assistant/teaching assistant to help them in class in all areas however sometimes the assistant can work with particular reference to the pupil's social communication difficulties. This allocation of a pupil support assistant must be done only with the consent of the parents (DfE/DoH, 2015). This social communication partner can aid the child in expressing his/her needs by accessing visual clues, pictures (PECS) or symbols. The assistant can help the child to communicate and have their feelings known through gestures, eye gaze, head leaning etc. to the child's peers or teacher as a means of communication (Drasgow and Halle, 1995 cited in Lang et al. 2014)) although physical problems with the child may limit the effectiveness. The use of a pupil support assistant therefore is helpful for a child trying to express his/her needs. In addition to the above as a pupil assistant is working in a 1:1 situation they are more easily placed to understand the child's needs and model the correct way to verbally demonstrate them. Plavnick and Hume (2014) found that modeling can improve the learning of children with ASD. Each strategy or device should be adapted to reflect the mental and physical ability of the child. Pictures, speech generating devices and computer programmes are the most commonly used assistive technology with regard to communication.

ii. Social skills development

Deficiencies in social skills can result in loneliness, isolation, bullying, academic and vocational underachievement and social anxiety. These traits are the most prevalent within the ASD population (Attwood, 2007, Lang et al. 2010, White et al. 2007, Lang et al. 2014). Therefore assistive technologies have been developed with a view to improving the social skills of the ASD population thus lowering the occurrence of anxiousness. There are different strategies which are currently in use

within primary schools to assist in this area. Hopkins (2011) used computer programmes such as FaceSay to improve social skills by recognising the differences between facial expressions and how to identify emotions. This was achieved through examination of pictures and discussion concerning their differences and results were observed in both high and low functioning people with ASD.

Social stories are used to help ASD pupils to develop their social skills (The National Autistic Society, 2015). Hoffman (2013) has reviewed several social story interventions in New Zealand from Agosta, Graetz, Mastropieri and Scruggs (2004), Kagoharo et al. (2012) and O'Connor (2009). It is from these studies that Hoffman was able to conclude that social story skills development can have an impact on stress levels and this intervention "can do much to reduce anxiety" (page 34).

A programme named 'Talkabout' has been developed for use in UK schools called 'TALKABOUT: A Social communication skills package' (Kelly, 1996). This is a social communication skills package available to UK primary schools which has been designed with six levels. Each level deals with a particular aspect of communication – self-awareness, communication skills in a group, body language, talking and conversational and assertiveness skills. 'Talkabout' enables teachers to have a more structured plan to their social skills groups and ensures coverage of the following areas which often required developing in children with ASD.

1. *Me and You* – a focus on self-awareness and awareness of others.
2. *Communication* – children can assess their own communication skills.
3. *The Way We Talk* – a focus on improving paralinguistic skills.
4. *Conversations* – ways in which to improve conversational skills.
5. *Assertiveness* – ways in which to become aware of our assertiveness skills and how to use them effectively from passivity to assertiveness to aggression.

In the US (similar research is not available in the UK) Reed, Hyman and Hirst (2011) conducted a review of 29 different approaches which have the aim of assisting with social skills development. It was found that assistive technology has been used in homes and schools to aid:

1. Initiate conversation
2. Engage in more developed and social forms of play
3. Follow social conventions and norms during conversations
4. Respond to social initiations of others
5. Solve social problems
6. Identify and regulate emotions

Different strategies have been used to focus on the above aims however it was found in the US that video modelling was the most common. Again no such research is available for the UK. Shipley-Benamou et al. (2002) explored video modelling where a child watches an interaction and attempts to copy this. Shipley-Benamou found this can be successful in promoting socially acceptable behaviours. This modelling can also be done in person which is something I have personally observed in UK classrooms. The model (a peer, therapist etc) performs the skill for the person requiring the intervention. It is usually more successful with children who occasionally exhibit the expected behaviour already. Bellini (2007) who also used video modelling, this time with children in Reception class to teach them how to interact socially. After watching themselves seventeen times (once a day) on the video showing expected behaviours, the children then continued play appropriate without any more direction. Tracey Galialisatos and Graff (2003) discovered that the reinforcement of preferred behaviours during such episodes greatly reduced such occurrences. However as Guillott, Furniss and Walter, (2001) noted, there are several different expressions of anxiousness which result in repetitive behaviours all of which are the outward expressions of a child with ASD. Some people with ASD argue against this type of strategy as they claim that repetitive body movements are not always negative but are soothing and stress relieving (BBC, 2018) and therefore should not be opposed to make other people more comfortable. Script training is another popular assistive technology whereby the leader reads from a pre prepared script. The child is then taken to the situation described to practise behaving in an

acceptable way, for example maintaining eye contact, wait while the other person speaks etc (Wicknick, 2010).

Social Communication, Emotional Regulation and Transactional Support or SCERTS is an educational approach which is designed to support children with ASD. Its main aim is to develop a child's social development thus limiting the appearance of negative behaviours. At the heart of SCERTS is the collaboration of all the major stakeholders – child, family, teachers and specialists.

The acronym “SCERTS” refers to the focus on (Prizant, Wetherby, Rubin and Laurent, 2007, p. 1):

“SC” – Social Communication – the development of spontaneous, functional communication, emotional expression, and secure and trusting relationships with children and adults;

“ER” – Emotional Regulation – the development of the ability to maintain a well-regulated emotional state to cope with everyday stress, and to be most available for learning and interacting;

“TS” – Transactional Support – the development and implementation of supports to help partners respond to the child's needs and interests, modify and adapt the environment, and provide tools to enhance learning (e.g., picture communication, written schedules, and sensory supports). Specific plans are also developed to provide educational and emotional support to families, and to foster teamwork among professionals.

The stakeholders aim to work in a consistent way across different settings (home and school) with the child through following a developmentally sequenced and systematic framework. There has been support for this approach with Morgan et al.'s, (2018) research finding that SCERTS improves social skills and minimises negative behaviour, concluding that the SCERTS approach is a positive way in which to support pupils with ASD in the classroom.

iii. Living skills development

Within the adult ASD population surveys have been developed to measure the existence and development of essential living skills, (Wallace et al. 2000). Smith

et al. (2012)'s work is relevant here as it found that ASD people fall short of independent functioning during their adolescence and 20's which is also cited in Lang et al. (2014) and therefore the area of developing living skills is one of great importance to the ASD population. Picture based support systems and video modelling are also used to help teach living and personal care skills.

Pierce et al. (1994) found that the use of pictorial resources/technologies resulted in children with ASD successfully managing their behaviour in the absence of an adult to function independently. Bryan and Gast (2000) cited in Hoffman (2013) describe how using an object of obsession, which is a common occurrence in children with ASD, can be used to reinforce suitable interaction with the environment. Individual work stations are also often used in UK classrooms (DfE/DoH, 2014) as an additional way to support an ASD child in this way to develop their skills through extended concentration by limiting distractions to the child's environment.

Lang et al. (2014) have provided an overview of assistive technologies used in the US since 2000 and Hoffman (2013) in New Zealand. This study aimed to investigate the assistive technologies currently employed in UK primary schools and the effect they have.

iv. Other technologies/strategies to reduce stress/unwanted behaviours in the classroom

'The Attention Autism Programme'

In addition to the above, there are training courses which are available to teachers in England which have the aim of addressing some of the needs of pupils with ASD in primary classrooms. The aim overall hope is to support the social, emotional and behavioural areas listed above which are common areas in which pupils with ASD often struggle through the use of different approaches which may include the use of assistive technologies. An example of a current intervention programme is 'The Attention Autism Programme.'

'The Attention Autism Programme' was developed a qualified Speech and Language Therapist who works with parents, carers, schools and families with the aim of assisting children with ASD to develop their communication skills in a

motivating way for all. 'The Attention Autism Programme' is offered to mainstream and special needs settings in England and is linked to the current educational framework.

This programme targets the teaching of attention, communication and social interaction skills with the aim of allowing the attendees to begin the intervention programme immediately once they return to their own school.

Attention Autism Day 1

- to offer ideas for interventions
- introduction to autism for the non-specialist of how to teach and engage pupils with ASD
- strong focus upon using the pupils' own interest and learning strengths to develop new skills.

Attention Autism Day 2

- communication development and how it can be targeted and improved within educational settings
- acknowledgement that some pupils are able to speak while others are either preverbal or non-verbal
- develop functional social communication, understanding and spontaneous communication. In this type of climate it is hoped that 'interaction, problem communication and learning can flourish' (<http://ginadavies.co.uk/>)
- helping pupils with ASD to move from adult led learning to more independent work
- how best to plan, record attainment and to personalise the interventions for each individual pupil.

The Comprehensive Application of Behaviour Analysis to Schooling (CABAS)

The Comprehensive Application of Behavior Analysis to Schooling (CABAS) is an early intensive teaching program used to educate a child with language acquisition, social skills, academic skills and other verbal development (Greer, 2002). Healy et al. (2008) has described the teaching practices as:

- Logical and empirically based curricular sequences
- Functional curriculum based on the verbal behaviour of the child
- 1:1 teacher/student ratio
- Personalised System of Instruction (PSI) (Keller, 1968)
- Direct instruction and observational learning

O'Connor and Healy (2008) have researched these interventions and uncovered differing results - some participants maintaining their improvement while others did not.

Daily Life Therapy/Higashi

Daily Life Therapy (also known as the Higashi method) is very specialised form of education began in special schools located in Tokyo, Japan and Boston, USA although now it has been employed elsewhere or at least been incorporated into some aspects of different schools' teaching. It was developed to assist children with ASD and thus reduce stressful situations from developing. There has only been one review and evaluation made (Larkin and Gurry, 1998). It is therefore impossible to access its effectiveness. This program is holistic in nature and consists of five main elements (Research Autism, 2017):

- 'the curriculum focuses on movement, music, and art
- the children undertake rigorous physical exercise throughout the day
- the instruction is group-oriented i.e. all the children in a class are taught exactly the same thing at the same time
- the children are taught via imitation i.e. they copy precisely what the teacher does
- routine activities are highly structured'

Although it is understood that this type of specialist teaching is unlikely to be observed in mainstream UK primary classrooms, some of the aspects, such as physical education breaks and structured sessions, may indeed be incorporated.

The TEACCH Programme

The 'TEACCH (Treatment and Education of Autistic and Communication-Handicapped Children) originated in North Carolina, USA and is an intervention designed exclusively for pupils with ASD. At the heart of TEACCH is a desire to create a pupil centred plan, building upon their strengths and addressing their difficulties, rather than introducing the child to a standard curriculum.

TEACCH builds upon the strengths of each pupil within a very structured environment –'structured teaching'. The four major components of structured teaching are (Research Autism, 2017):

- physical structure (the organisation of the room)
- visual schedules (visual information depicting where/when/what the activity will be)
- work systems (visual information informing an individual what to do while in a work or play area)
- task organisation (visually clear information on what the task is about).

The TEACCH website (TEACCH, 2018) claims that 'over the past 40 years, only 5% of TEACCH's adult clients with autism have to be institutionalized, compared to an average of 46% internationally'. Many of these ideas are incorporated into the different measures described previously.

'TEACCH Core Values

TEACHING. We share our knowledge of Autism Spectrum Disorder

EXPANDING. We are committed to expanding our own knowledge and that of others

APPRECIATING. We understand and appreciate the unique strengths of people with Autism Spectrum Disorder

COLLABORATING AND COOPERATING. We embody a spirit of collaboration and cooperation in our interactions all

HOLISTIC. We stress the importance of looking at the whole person

The TEACCH programme follows an intervention approach named 'Structured TEACCHing' (Mesibov, Shea and Schopler, 2005) encompassing many different approaches. The TEACCH programme therefore is a highly specialised programme designed for pupils with ASD.

ELSA

ELSA is another support intervention which also aims to assist SEN pupils in classrooms. It was created by an Educational Psychologist (ELSA, 2018). ICT is at the heart of ELSA.

ELSA is different to 'Attention Autism' as it is concerned with literacy teaching. ELSA is not designed solely for pupils with ASD but as it aims to support the teaching of emotional literacy or emotional intelligence it is understood to be relevant to pupils with ASD as emotional difficulties are one of the main areas in which pupils with ASD experience. Another difference between 'Attention Autism' and ELSA concerns the staff member who leads the learning. ELSA is designed to be administered by teaching assistants and not teachers in school whereas 'Attention Autism' has been developed for teachers. Indeed the acronym ELSA stands for:

Emotional Literacy Support Assistant

To some extent ELSA is readily available to schools and some of the resources are free to download from the internet however for some a fee is payable. Training is available for teaching assistants through participation via Educational Psychologists.

The ELSA programme is designed to be run over a group of weeks. Different aspects of emotional development are covered in the ELSA programme. Bereavement, social listening skills, understanding emotions, raising self-esteem and developing friendships are common themes. It is hoped pupils will be better able to manage difficulties which they may experience in life. As described previously these are difficulties which are often associated with children with ASD.

'Clicker' Programme

'Clicker' is an interactive literacy toolkit which aims to help pupils in primary school practice and improve their literacy skills through ICT. It is advertised to teachers as a fully differentiated curriculum which is user friendly and engaging for children (Clicker 7, 2018).

Some screen shots from 'Clicker' which highlight the strong visual supports now follow as figures 4, 5 and 6.

Figure 4: First example from 'Clicker' showing visual supports

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Figure 5: Second example from 'Clicker' showing word recognition and associations

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It is well established that pupils with ASD are often supported by visual prompts (Bondy and Frost, 2002). These may include visual timetables, illustrative pictures and the display of words for example. Although this programme was not created with ASD pupils solely in mind, this programme may offer some benefits to these individuals in regards to this area of difficulty. Other features of this programme include 'Voice Notes' which allows users to record their own audio before they write, the ability to hear their own work read back to them, word prediction which acts as a thesaurus and a spelling check and word banks as shown below in figure 6.

Figure 6: 'Voice Notes' example from 'Clicker'

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As this programme offers visual supports which is known to assist pupils with ASD, it is suitable for use with pupils with ASD.

2.7: A brief, critical review of the literature

Due to the continually increasing number of children diagnosed with ASD (impairments social interactions and restricted and repetitive behaviour – APA, 2018), the amount of research into this area has also increased. The prevalence study of children, (Baird G. et al., 2006) looked at a population in the South Thames area using the respected Autism Diagnostic Interview-Revised and the Autism Diagnostic Observation Schedule. This research found that 1.16% of children ages 9 – 10 can now be diagnosed with ASD in contrast with Fombonne's (1999) findings of just 0.05%. This increase has been accompanied by a rise in the amount of research into ASD,

however this research has been mainly focused upon investigating the medical, physical reasons for the existence of ASD rather than how this condition can be managed in daily life (Pellicano, 2013).

When considering the existence of support strategies Gray et al., 2008 (citing Nickel, 1996 and Tanguary, 2000), found parents of children with ASD are often overwhelmed by promises of traditional and non-traditional therapies in addition to other miracle cures including the use of drugs. As every child is unique in their ASD diagnosis and level of severity there still remains to be found a universal strategy which is of use in supporting children with ASD in their areas of development. Common behavioural and developmental concerns begin during early childhood, pre 3 years old, and become more pronounced as the child grows. Social skills development, emotional attachments and repetitive behaviours for example, are established areas of difficulty (DSM-5, 2013).

It has been established that the difficulties children with ASD face with social, emotional and behavioural functioning are linked to the development of anxiety and depression (Gratz et al., 2009; Hessler and Katz, 2010; Macklem, 2008). Within the research completed regarding the impact ASD can have on daily life, there has been a focus upon the stresses of caring for child with ASD in the home. Parental and family stress (for example Rubens, 2009, Mak et al. 2006 and Carbone et al. 2012) have been investigated however there has been a lack of investigation into the actual stresses the child with ASD experiences themselves and how this can be most effectively managed. Research regarding the anxiety felt by people close to children with ASD has focused upon how these people perceive ASD and how this affects their child and, in turn, affects themselves and family life. To the researcher's knowledge there has not been any exploration of how the children themselves feel and, following on from this, how this can be best managed within the UK. It is therefore felt that this is an area in which research could be developed. The research into anxiety levels in the family members of children with ASD has been completed using mainly quantitative methods including the use of surveys and questionnaires but have not generated much qualitative data about school experiences.

In addition there has been an interest in different approaches towards assisting SEN pupils within the classroom. Lancioni et al. (2014) has written extensively about different strategies that can be employed to help people with special needs live more

fully in society in the US. This also encompasses provision in a mainstream class to support a wide range of special needs children including those with ASD. Hoffman (2013) has also investigated support ideas in New Zealand. Although this research is based in the US and New Zealand it is still relevant and useful for supporting those with special needs in the UK. Identified areas in which people may benefit from support are listed below. Strategies and assistive technologies can be used for a variety of special needs including:

- Brain trauma or injury
- Communication difficulties
- Visual problems
- ASD
- Behavioural issues
- Alzheimer's
- Other learning and intellectual multiple difficulties

Within the above list it is clear that although ASD has its own section, some of the other areas may still be relevant. Indeed the wide range of difficulties children with ASD experience may fall into all the other categories with the exception of Alzheimer's. For example the existence of behaviour issues or communication difficulties are often also present with pupils diagnosed with ASD. Therefore it was hoped that a wide range of strategies described in this chapter might have been observed in classroom during this study.

This study was therefore planned with the aim of investigating the levels of children with ASD's social, emotional and behavioural functioning and how these are being managed in contemporary schools. Due to the connections between ASD and anxiety it was hoped that this study might help to fill the gap in research between the high levels of anxiety the children with ASD may experience and which technologies and strategies are currently being used for their benefit. Therefore this study aimed to explore in depth how teachers teach and organise support for pupils with ASD who show different patterns of social, emotional and behavioural functioning in primary settings.

Part 1

Aim 1: To explore the reported level of social, emotional and behavioural functioning of primary aged children identified as having ASD reported by the pupils and their parents and teachers.

Part 2

Aim 2: To examine how teachers make sense and address the social, emotional and behavioural needs of primary children with ASD in class settings.

Part 3

Aim 3: To explore in depth how teachers teach and organise support for pupils with ASD who show different patterns of social, emotional and behavioural functioning in primary settings.

Chapter 3: Methodology

3.1: Introduction

In this chapter I describe the methods used in each of the parts of the study, situated within a mixed design methodological approach. The first part of this study set out to investigate and compare the pupil reported level of social, emotional and behavioural functioning of pupils with ASD with parents and teaching staffs reported levels through the use of two surveys – The Revised Children’s Anxiety and Depression Scale (RCADS) and The Strengths and Difficulties Questionnaire (SDQ). These surveys generated quantitative data which were then analysed to compare and contrast the opinions about from the three respondents concerning their ideas about pupils’ difficulties in the area of social, emotional and behavioural functioning.

The second part used interviews of teachers to examine how they make sense and address the social, emotional and behavioural needs of primary children with ASD in their class settings, it also asked about different strategies currently being employed in primary school settings. Through these interviews qualitative data was generated and analysed thematically using content analysis. The responses of all teachers were taken into account to provide a broad snapshot of contemporary practice regarding the support class teachers can offer pupils with ASD.

The final part explored, through naturalistic case studies, how teachers teach and organise support for pupils with ASD who show different patterns of social, emotional and behavioural functioning in primary settings. A selection of pupils were chosen for this final section which encompassed pupils across the spectrum of social, emotional and behavioural functioning. In this way support and resources employed for the broadest range of pupils was explored. Data was generated from observations in the classrooms and interviews with both teaching staff and pupils.

3.2.1: Philosophical assumptions associated with the overall design

A brief reflection on how philosophical assumptions have informed the methodological design of this research study will now follow.

A mixed design methodology was adopted for this research study. As Bryman (2006) explains that the best methodological approach for gaining answers to the research questions should be employed, rather than committing solely to a particular paradigm or philosophical doctrine. It is thought that a methodological approach best served to generate data from each of the three research questions, part 1 (quantitative), part 2 (quantitative and qualitative) and part 3 (case studies/qualitative). Parts 1 and 2, regarding the actual level and perceived level of social, emotional and behavioural functioning of pupils with ASD and how this is currently managed, provided generalising information while part 3, concerning further investigation through case studies of how these difficulties are managed, allowed a deeper, more individualised knowledge to be gained. The pursuit of individualised knowledge allowed actual strategies to be investigated within selected educational settings during the case studies. This enabled the exploration of the usefulness and effectiveness of strategies in a contemporary, real environment.

However it is recognised that some researchers critique this type of design. Critics have claimed that qualitative and quantitative research methods are incompatible in one study. Sale, Lohfeld and Brazil (2002) state that these two paradigms cannot be combined as they have different assumptions of the same phenomena. However as Robson (2013) points out work completed by Bryman, (1988) and Hammersley (1992) have challenged this philosophical assumption. Indeed Hammersley explains how the type of research questions being asked shape the type of methodology employed and different approaches need not be conflicting. Robson (2013) also highlights that more and more researchers do successfully combine the two paradigms and quotes Bryman (2006) that only 6% of researchers had any compatibility or philosophical issues in their work. Hence, it is felt that a mixed design methodology is both suitable and acceptable for this research study.

There have also been discussions regarding the limitations and negative issues when a mixed methodological approach is employed for example does a sole researcher have the time and skill to analyse and interpret two or more sets of data? (Greene, Caracelli and Graham, 1989, in Robson, 2013). However in this research study the area and sample numbers to be investigated will be small. The researcher worked on each of the three aims in chronological order – generating the data and analysing the results before progressing to the next section. Therefore it is felt that

this was not be a concern. Mason (2006) as quoted in Robson (2013) has also stated that mixed methodological approaches can result in disjointed work. However this research study was be carried out logically from the first, to the second, to the third part. Each part or aim followed on from and builds on the previous one therefore there was little concern that issues raised by Mason regarding illogical or unfocussed work would be generated.

3.2.2: Methodological questions and approaches: The use and justification of a mixed methods approach including all three parts and aims.

Robson (2013) describes how a pragmatic approach uses “whatever philosophical or methodological approach works best for the particular research problem” (p.28). Indeed based on ideas from Johnson and Onwuegbuzie (2004), some of the features of a pragmatic approach may include the following. These are present in this study.

- Places high regard for the reality of, and influence of, the inner world of human experience in action.
- Knowledge is viewed as being both constructed and based on the reality of the world we experience and live in.
- Endorses fallibilism (current beliefs and research conclusions are rarely, if ever, viewed as perfect, certain or absolute. Current truth, meaning and knowledge changes over time so therefore are only provisional truths.
- Endorses eclecticism and pluralism (eg. different, even conflicting, theories and perspectives can be useful: observation, experience and experiments are all useful ways to gain an understanding or people and the world).
- Human enquiry (ie. what we do in our day-to-day lives as we interact with our environments) is viewed as being analogous to experimental and scientific enquiry. We all try out things to see what works, what solves problems and what helps us to survive as seen through the teachers’ interviews in this study.
- Endorses practical theory (theory that informs effective practice).

This research study was undertaken using a mixed methods approach to integrate both qualitative and quantitative approaches to research (Bickman and Roy, 2009). There exist many typologies of mixed methods research. Mixed methods is sometimes called 'multi-strategy designs' (Robson, 2011) as they employ more than one research strategy. This strategy contained a 'substantial element of qualitative data collection as well as a substantial element of quantitative data collection' (Robson, 2011, page 161) to produce both generalised and individualised knowledge. Morse and Niehaus (2009) disagree with this combination of sources and state that mixed methods means the two techniques employed must be from the same approach, for example quantitative and quantitative or qualitative and qualitative. Creswell and Plano Clark (2011) have discussed how depending on where the actual data integration is considered to have taken place, for example either in the data collection or in the analysis section, the description of the mixed methods employed would be different. However as Creswell, Klassen, Plano Clark and Clegg (2011) state a good research design including the justification of a mixed methods approach is accepted as a good standard whereby mixed method research can be judged without an in-depth look at the different typologies. This study followed the mixed methods approach described by Robson (2013) as the combination of quantitative and qualitative data generated generalised and individualised knowledge. The generalised knowledge was generated from the sample of schools visited in parts 1 and 2 where the levels and types of social, emotional and behavioural functioning experienced by pupils with ASD and the range of strategies employed to support this were investigated. More individualised knowledge was produced through the interviews and observations concerning case studies of these strategies in part 3. The methods used will be described later in this section but include the type of data collection and analysis methods used and the kind of data which they produced.

The mixed methods approach arose in the 1990's, emerging from the 1950 – 1970 quantitative and the 1970 – 1990 qualitative paradigm debates (Robson, 2011). Denscombe (2008) has argued that there are some defining characteristics of the mixed methods design, which are:

- Quantitative and qualitative methods within the same research project
- A research design that clearly specifies the sequencing and priority that is given to the quantitative and qualitative elements of data collection and analysis
- An explicit account of the manner in which the quantitative and qualitative aspects of the research relate to each other
- Pragmatism as the philosophical underpinning for the research

This study contains these characteristics as quantitative and qualitative data was generated, quantitative in part one and qualitative in parts two and three. Robson (2013) illustrates a typology of mixed method designs based upon Creswell (2003). This edited typology is illustrated below and, as will be shown throughout this chapter, follows the schedule of this study. Other typologies are listed in appendix 1.

B) *Sequential explanatory design* – characterised by the collection and analysis of quantitative data followed by the collection and analysis of qualitative data. Priority is generally given to the quantitative data and the two methods are integrated during the interpretation phase of the study. The qualitative data function to help explain and interpret the findings of a primarily quantitative study.

This study used the above approach as it was considered to be the best way in which to generate data to answer the research questions. Firstly quantitative data was collected and analysed in order to ascertain the levels of social, emotional and behavioural functioning of pupils with ASD while the qualitative data collection and analysis which followed concerning teacher understanding of ASD complimented the quantitative findings. The final part of this study investigated in more depth how support is organised and managed in schools generating more qualitative data. By using this sequential explanatory design the different areas of interest to this study could be investigated thoroughly. As the study was actually carried out this selection of design proved to be a good choice as the study flowed well from one part to the next generating the data required to answer the research questions.

Part 1

Part 1 aim: To research the reported level of social, emotional and behavioural functioning of primary aged children identified as having ASD reported by the pupils and their parents and teachers. What pattern of social, emotional and behavioural difficulties and prosocial behaviour are found in a group of primary aged pupils with ASD from different perspectives?

The first part of the study was undertaken through two broad surveys one of which included teachers and parents and the other parents, teachers and pupils. The statistical analysis followed the generation of the initial raw data and correlations and comparisons were investigated and drawn. This approach was selected as it generated more generalised knowledge. It is felt this approach was justified as this knowledge provided an idea of the extent to which a sample of participants experience different levels and types of social, emotional and behavioural functioning. Although LeCompte and Goetz (1982) have described the limits to generalising, for example in this case it may be limited to only this specific group of students, it was felt that this was acceptable as the group of pupils from which this data was generated were the subject of specific interest (Robson, 2011). This study may produce similar results with other pupils with ASD in different settings to the ones visited here however this was outside the scope of this study. It was also then possible to compare the results of pupils with parents and teachers to investigate whether the perception of others is consistent with this.

The SQD and the RCADS were both used as they generated data to answer the first research question regarding the levels of social, emotional and behavioural functioning of pupils with ASD. They are both well-established surveys and have been used in many research studies. The SDQ has been used by the Child and Adolescent Mental Health Services in the U.K. for many years and is very useful in providing a broad overview of the nature of the subject however is not able to provide detailed information unlike the RCADS which provides greater analysis and understanding of the issues belonging experienced (Wolpert, Cheng and Deighton, 2015). The RCADS has also been analysed by many including Ebesutani et al., (2011) who focused on parent responses and found that this scale has high internal consistency, reliability and validity and is therefore an good way in which to measure

depression and anxiety disorders and a reliable and established scale to use in this study.

Content and design of the self-completion questionnaires

The levels from the SDQ and the RCADS were collected from schools during the first visit to answer the research question. This created a holistic view of the function of each child as levels were determined concerning general difficulties through the SQD in addition to identifying the exact areas in which the children experience depression or anxiety (RCADS). It was also useful to generate information from different respondents – pupils, teachers and parents – to compare the levels of difficulty from different these different perspectives.

The Strengths and Difficulties Questionnaire (SDQ) (Goodman, 1997) was administered in order to investigate a range of social, emotional and behavioural functioning experienced by these children (appendix 2). The SDQ provides measurements in the following areas for each child:

- 1) emotional symptoms (5 items)
- 2) conduct problems (5 items)
- 3) hyperactivity/inattention (5 items)
- 4) peer relationship problems (5 items)
- 5) prosocial behaviour

In addition the first five scales can be added together to find the total difficulty score for each child from each participant. Therefore the results from this scale can provide:

Total subscales

Total difficulty score = cumulative 1 - 4

The SDQ survey provides questionnaires for teachers and parents, however it does not include a questionnaire for primary aged children. There is a self-questionnaire however this is only suitable for post 11 years old (Goodman, 1997) and so was not used in this primary focused study as the pupils in my sample were

all under 12 years old. Therefore there was not any data generated from the pupils from the SDQ. The research questions concerning children's self-identification were reliant upon the data collected from the RCADS survey, which will be described next, and does include a suitable questionnaire for primary aged children.

The SDQ is a brief behavioural screening questionnaire about 3 -16 year olds (SDQ, 2016). It was developed in the United Kingdom by Goodman, a child psychiatrist, (Goodman, 1997). To employ the SDQ the researcher must visit every pupils' teacher and parent in their school environment to complete the questionnaire. Teacher and parents can either complete their questionnaires with the researcher or alone. The questions on the SDQ are linked to the five areas listed above. Each question is linked to one of the five areas listed above. The SDQ is a closed questionnaire where the participants select a response from those given. Responses within each section are placed on a three point Likert agree-disagree scale. The participants are asked to specify their level of agreement or disagreement on a symmetric agree-disagree scale for a series of statements. Each question has three possible responses:

0 – not true

1 – somewhat true

2 – certainly true

Secondly the Revised Children's Anxiety and Depression Scale (RCADS) was administered. This scale has 6 sub areas and a cumulative total anxiety score:

- a. Separation anxiety
- b. Social phobia
- c. Generalised anxiety
- d. Panic disorder
- e. Obsessive compulsive
- f. Major depression

Total anxiety score = cumulative 1-5

The RCADS is a 47-item questionnaire that measures the frequency of various symptoms of anxiety as listed above. The RCADS can be used with older primary pupils in addition to with teachers and parents. It was developed in the US by Chorpita, Yim, Moffitt, Umemoto & Francis, (2000) as a near revision of Spence's Children's Anxiety Scale (SCAS, 1997). The scales used in the RCADS were created in accordance with the anxiety and depression diagnosis criteria of the DSM-4 described in chapter 2. Each answer has four possible responses on the Likert Scale. Responses within each section are placed on a four point Likert agree-disagree scale. The Likert scale is a psychometric scale commonly involved in research and as mentioned above is the most widely used approach to scaling responses in survey research. The children are asked to specify their level of agreement or disagreement on a symmetric agree-disagree scale for a series of statements. The adult version (used to investigate the perceived level of anxiety experienced by children with ASD by teachers and parents) is called the RCADS-P.

0 – never

1 – sometimes

2 – often

– always

The survey measures the level of anxiety and depression experienced by children of primary and secondary age. Below are listed the number of questions relating to each sub area:

1. Major Depressive Disorder (MDD; 10 items)
2. Panic Disorder (PD; 9 items)
3. Social Phobia (SoP; 9 items)
4. Separation Anxiety Disorder (SAD; 7 items)
5. Generalised Anxiety Disorder (GAD; 6 items)
6. Obsessive-Compulsive Disorder (OCD; 6 items)

The responses generate two scores from these questions can generate two scores:

1. Total anxiety (from the five anxiety subscales)
2. Total internalising (from all six subscales)

All pupils undertook the RCADS survey which provided the levels and types of anxiety and depression children were experiencing via the children, teachers and parents versions regardless of what levels of social, emotional and behavioural difficulties the SDQ highlighted. Therefore if all the participants responded each child had a full set of results – SQD and RCADS giving a complete picture of the social, emotional and behavioural functioning of the pupil. However some responses are missing due to either the non-return of the survey from teacher or parents or the inability of the pupil to respond to the questionnaire.

Teachers and pupils completed their surveys at school with the researcher during school time. The self-completion questionnaires were employed for parents due to their suitability and financial reasons. Self-completion surveys are far more cost effective than face-to-face interviews (Robson, 2013). Usually they only required the cost of postage however as I either hand delivered or emailed the surveys to the educational settings directly to the staff involved, even this cost was removed. The schools printed out the letter and permission slip home to the parents via their usual correspondence policy.

Careful consideration was given to provide a clear, engaging layout with simplistic wording as rates are higher with visually pleasing layout, Mangione and Van Nes (2009). The researcher typed the survey questions in a straight forward layout to be sent to the parental participants both on paper and online (appendix 3). The opening statements in the RCADS-P were easy and straightforward to encourage participation (e.g. is the child restless, overactive, cannot stay still for long) and were followed by statements covering more difficult issues which require more thought (e.g. do the difficulties interfere with your child's everyday life in the following areas? Home life/friendships/classroom learning/leisure activities?) (Goodman, 1999). Both surveys finished with a short statement to encourage the return of the questionnaires on paper and an envelope into which the questionnaire could be placed for confidentiality was included. The questions were numbered for clarity and ease of progression. The participants were simply required to select the level written on the paper to which they agree with each statement (appendix 3).

A covering letter accompanied the survey itself, tailored to whomever are the participants, clearly explaining the aims and confidentiality as Mangione and Van Nes (2009), referencing (Boek and Lade, 1963), explain that participants are more likely to return a survey if they believe their confidentiality is assured.

Content and design of the pupils' survey

The content and design of the pupils' survey were very similar to that which is listed above, however these were conducted face-to-face one-to-one as explained in the next section. The pupils' survey was highly structured using the RCADS (appendix 10.) These surveys included the following parts:

- A written introduction to be read aloud (to ensure all pupils receive the same introduction to include my name, the reasons for my visit and their invitation to take part)
- Introduction to more complex questions/explanation of questions
- Any questions?
- The statements read aloud and explained as the age or ability requires
- Summary and ending (thank you and goodbye)

It was a concern that some children may have additional barriers to learning which may affect their ability to articulate their views and feelings. The following steps were taken to ensure that as many children as possible were able to take part in the study and that this participation was meaningful. All children with ASD were invited to take part and were supported through the use of simple language and the location of a familiar place. At each school the researcher was accompanied by a member of staff with whom the pupil was familiar. The researcher asked this member of staff if the pupil would be more comfortable and give more truthful and meaningful answers if the member of staff remained sitting next to them or in the local vicinity. The researcher took on-board any suggestions which were made by the staff who knew the pupil. If the member of staff suggested that the pupil would be unable to participate the researcher sat with the pupil for a few moments and following the introduction, spoke about the study to allow all the pupils to have the opportunity to take part and not to exclude anyone. If the researcher felt that the

pupil would indeed be unable to access the questions the meeting terminated as to avoid any distress to the pupil. It had been thought that picture cards and pictorial illustrations may help some pupils to access the material however this would not have been helpful to the pupils who were not able to access the questions as they could not access this material either. These steps allowed the widest range of children with ASD to take part. However five pupils were fully or partly non-verbal and unable to complete the questionnaire and access the questions in this study. Therefore their responses were not taken so ensure only meaningful insights were included.

Part 2

Part 2 aim: To examine how teachers make sense and address the social, emotional and behavioural needs of primary children with ASD in class settings.

The data gained from the second part of the study was generated through structured and semi-structured interviews with the teachers. This part of the study focussed upon the teaching practice and how a teacher addresses and manages the social, emotions and behaviour of pupils with ASD in the classroom.

Exactly what teachers do and how they support the pupils in their classes was investigated through structured and semi-structured interviews. Consideration was given to the checking of reliability through questioning and discussion – triangulation (focusing on the same thing in different ways), (Robson, 2011). The second part of the interview contained more open ended questions as a way of generating a more qualitative type of knowledge in contrast to the knowledge gained in part one. It is felt that this approach was justified as it allowed this new area of research concerning current practice to be investigated and undertaken for the first time. This individualised knowledge relies upon people explaining their views on their own terms and thus provided a good way in which to explore the viewpoints of teaching staff regarding the support of pupils with ASD in the classroom.

Content and design of the teachers' interview based questionnaires

This second part of the study focused on current classroom practice and the data collection took place in all of the schools which were visited and participated in part one. It was originally planned that the children with the highest actual levels from part one (with precedence given to the teachers' survey results if there were a joint score) would be selected for the second part (approximately 30). The teachers' responses would be used to identify the highest levels as they have a working knowledge of the children in a classroom environment. However this was altered as the study progressed to this stage. In eventuality, as describe in greater detail later in section 3.7, all teachers of the 42 pupils were interviewed at this stage and therefore all the pupils' had their information included. Although this took much longer for the researcher to complete it was thought that having all the teachers' data would create a much broader study and would create a good amount of valuable data (Sekaran and Bougie, 2010). By including all of the teachers for part one it was felt that the study would be broader and provide deeper evidence as the widest possible range of participants would be included in the data generated. It was considered the most feasible way in which to explore the current provision within a certain geographical area (south London area) for a sole researcher as it allowed the researcher to investigate the contemporary situation of social, emotional and behavioural management in all of the schools included in part one. Therefore all 42 pupils' teachers were included in part two.

The data collection for this second part of the study was generated from interviews with the children's class teachers. The teachers' interview was structured and semi-structured. The questions began with closed, pre-fixed questions and then developed into more open-ended questions as the interview progresses (see appendix 15). The semi-structured interviews produced qualitative data which helped to answer the research questions listed below concerning the perceived usefulness of the approaches employed and the abandoned approaches. The approaches examined covered a broad focus on different teaching approaches. These included the knowledge and understanding of the teacher, the ideas of the staff, the interactions between the teacher/TA etc.

As Robson (2013) and Mangione and Van Nes (2009), discuss there are some questions which should be avoided during interviews and this study followed

These questions were developed into seven different focus areas:

1. General background information
2. Knowledge about ASD
3. Concerns about teaching pupils with ASD
4. Current approaches and strategies
5. Support with approaches and strategies
6. Abandoned approaches and strategies
7. Further support and development

Each of these focus areas were divided up into areas which were to be covered. These areas had different sub-areas and further probing questions. These can be seen in appendix 4.

The questions were then piloted with a small group of teachers firstly as a way of investigating whether the above guidelines were followed. No changes were needed to be made however the piloting did allow the researcher the opportunity to become more familiar and confident with the format and delivery. Following the piloting it was clear that the time needed to prepare, visit the schools, conduct the interviews and leave was greater than previously thought. The length of the interview depended on the amount of time each individual teacher like to speak however the timed allocated for waiting for the teacher in schools, travelling to and from the schools and generally signing in and moving around schools would need to be increased. It was clear that only one school could be visited in each morning or afternoon session.

Part 3

Part 3 aim: To explore in depth how teachers teach and organize support for pupils with ASD who show different patterns of social, emotional and behavioural functioning in primary settings.

The third and final part of this study involved case studies. Yin (2009) has described case studies as a way of conducting research using many different sources in real life contexts to explore a particular phenomenon. Case studies can

be generally divided into the following seven types edited from Robson (2013) citing Hakin (2000):

Table 1: Description of different types of case studies

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This is the type of case study (5) which was therefore used in this study. Different schools were investigated to explore how they manage the emotions and behaviour of pupils with ASD in their care.

Individual case studies were justified as firstly the participants were already known to the researcher from part two of the project. This reduced the amount of time spent researching possible new participants in a one researcher project as well as having the added benefit of taking into account relationships previously established.

The case studies allowed an in depth look at six pupils' educational experience, creating a more individualised set of data and they allowed an analysis of which currently employed approaches are engaged with the pupils. It allowed the sole researcher to investigate the contemporary situation of social, emotional and behavioural management in the six pupils selected.

Lastly as case studies were undertaken in school settings, in the primary age range and with children whose social, emotional and behavioural functioning varied. It was hoped that the limitations were minimalised as the participants were varied and therefore did not adversely affect the results.

Content and design of the case studies

Six pupils were selected in the final part of the study including two pupils with the highest levels of difficulty (from the teachers' survey), two pupils who scored in the middle of the result and the two lowest scoring pupils. This allowed a range of pupils to be included in the study, creating a broader range of data as both ends of the spectrum of results would be included – pupils functioning well in schools and those with the most difficulties. The data generated was firstly from classroom observations and then finally from teacher and pupil interviews. The children were observed in their usual classroom setting focusing on their access to teaching approaches and their response to these approaches. The following interviews were an opportunity to investigate how both teachers and children perceived the usefulness of any approaches employed which improved their access to learning. The study then set out to draw conclusions using the data generated regarding how

teachers teach and organise support for pupils with ASD who show different patterns of social, emotional and behavioural functioning in primary settings.

We will now discuss each part of the study in turn in more detail, including the design, sampling, data collection and analysis methods employed.

3.3: Part One Introduction

This first section of the study was undertaken by a systematic survey of pupils, teachers and parents. The relationships between the types and degrees of social, emotional and behavioural functioning experienced by the pupils was compared with those of the teachers and parents and was then analysed using interval type data. In addition the survey highlighted the different types of anxiety experienced by children. In order to gain this raw data the following main research questions were addressed:

3.3.1: Aims and research questions

Aim 1: To research the reported level of social, emotional and behavioural functioning of primary aged children identified as having ASD reported by the pupils and their parents and teachers. What pattern of social, emotional and behavioural difficulties and prosocial behaviour are found in a group of primary aged pupils with ASD from different perspectives?

- a) What levels of social, emotional and behavioural difficulties (including anxiety and depression) are reported by pupils with ASD attending primary settings?
- b) What levels of social, emotional and behavioural difficulties (including anxiety and depression) do parents and teachers report of these children?
- c) What level of specific kinds of emotional difficulties (fears, anxiety, depression etc) are reported by children?
- d) To what extent do pupil and adult reports correlate?

3.3.2: Design - surveys

As introduced above the first part of this research study was undertaken using surveys. Surveys are a very common way in which to generate data (Robson, 2013) and are also less time and cash demanding (Bryman, 2008).

It was decided that the two surveys to be used would be the Strengths and Difficulties Questionnaire (SDQ) and the Revised Children’s Anxiety and Depression Scale (RCADS). The researcher visited every pupil whose school, teacher and parent had given permission to join the study. During the researcher’s visit the SDQ was administered first where appropriate (ie. with the teachers and if requested with the parents). This survey is a 25 item survey which highlights areas of difficulty a pupil may be experiencing (appendix 2). The RCADS questionnaire then followed. The RCADS is a 47 item questionnaire which is included here as appendix 3 (adult version) and appendix 5 (pupil version). The RCADS questionnaire generated data illustrating the type of anxiety which the pupil is experiencing. A fuller explanation was given to the younger children if required as transcribed in appendix 6.

Figure 7: Table showing the origin of evidence for each research question

	Teacher SDQ	Parent SDQ	Child RCADS	Teacher RCADS	Parent RCADS
Levels of social, emotional and behaviour are self-reported			✓		
Levels of social, emotional and behaviour are reported by parents and teachers	✓	✓		✓	✓
Correlation between pupil and adult reports			✓	✓	✓
Kinds of emotional difficulties			✓		

3.3.3: Participant sampling

The most practical use of time, availability and resources resulted in the researcher working with schools in the London area. This limited the amount of travelling time to the different schools and the broad range of schools allowed the aims of this project to be easily met in this area.

A sampling frame featuring a list of schools within each local authority which accommodate primary aged children and the number of pupils within them was generated. It was hoped that 60 children with ASD would take part however this had to change as the study progressed as described below. Using information from Anxiety UK that anxiety is a major difficulty for many adults with ASD or Asperger syndrome it was possible to deduce that finding autistic children who suffer anxiety would not be difficult as it is unfortunately not a rare occurrence. Indeed Attwood (2006) finds that within the Asperger Syndrome ASD population around 65% of adolescents...have a secondary mood or affective disorder (such as depression or anxiety).

It was planned that when responses from schools were received stratified sampling would then take place within the sampling frame. For example, one group or strata would be female and one male. This would help to ensure that a cross section of a primary school intake was included. Indeed it was also planned that if a vast number of children were interested in joining the study, random sampling would take place within the strata. However, although schools did have pupils with ASD on roll, there was a problem with receiving parental consent. It varied from school to school as did the efficiency of the SENCO's when dealing with paperwork. Some parents were very eager to join, others verbally agreed when the SENCO gave the consent form but did not return it. Therefore when the collection of all the consent forms were completed there were not many participants. Therefore neither the planned stratified sampling nor the random sampling mentioned above was necessary. Any parent who wished their child to join the study did so.

Below table 2 illustrates the number of schools contacted (414 in total) and the number of responses from these schools.

Table 2: Number of schools contacted and number of responses

Borough	Number of schools contacted	Number of positive school responses	Number of pupils joined
Lambeth	68	0	0
Southwark	74	3	6
Croydon	93	5	12
Wandsworth	61	2	16
Merton	44	2	3
Lewisham/Kent	74	2	5
Total	414	14	42

Within the London area participants were approached in three different ways. These were:

i. Via email

Firstly the researcher prepared letters of invitation to the study for both schools and parents (appendices 7, 8 and 9). The researcher made a list of all educational settings for primary aged children in several boroughs. These boroughs included Lambeth, Croydon, Wandsworth, Southwark, Merton and Lewisham/Kent. The actual list is not included here to protect anonymity. The researcher then read each school's website for background information about the school and the staff. The researcher sent an email to the head teacher and the SENCO in every school. Some schools were organised differently with an executive head teacher, INCO, SEN support for example in which case the researcher sent emails to these people as well to increase the chances of the letters being received by as many people as possible who might be either interested in the study. The researcher sent an email introducing herself and the background and aims of the study (appendices 7 and 8). The email then invited the schools to take part. They were asked to reply to the email if they would like pupils at their school to become participants. The researcher waited for responses.

When a positive response was received the researcher sent a formal introduction letter and permission slip to the schools for themselves and to send to the parents of the children who would be suitable to become participants in this study (appendices 10 and 11). Any primary aged child receiving support due to ASD were eligible to

join. All of the pupils either had a diagnosis of ASD or were currently awaiting the results of ASD testing which their schools believed would be positive and were already receiving some additional support. A letter was also forwarded to the class teachers of these children explaining the study and a consent form for them to sign if they would like to take part (appendix 12). All the consent forms were sent for every invited participant in a school all together or '*en bloc*' as Sapsford (2007), describes to be more efficient. If the parents and teachers responded positively the researcher emailed the SENCO, who was always the point of contact, to arrange a time when she could visit the school.

ii. Via local boroughs special needs units

The second way participants were also recruited was through the local boroughs. The researcher explored the different boroughs websites and contacted the members of staff within each councils' education department. Two responded and they contacted some schools in their area who may be interested in joining this study. If the schools were interested they were then contacted the researcher by email. From this point on these participants followed the same routine as listed above. It was planned that possibly other surrounding boroughs could be included if the response rate is low however that was not necessary in the end as a reasonable amount of participants had already been generated.

iii. Via SENCO forum

Finally participants were recruited was through the SENCO forum. The SENCO forum is an online support tool for working SENCO's where questions can be asked and ideas discussed (<http://lists.education.gov.uk/mailman/listinfo/senco-forum>). The researcher placed an invitation on the SENCO forum to invite interested schools to join the study (appendix 13). It was thought that this was a good way in which to engage with a wide number of SENCO's directly in case the emails sent to them in their schools had not reached them. This did generate an interesting response however some schools were too far away (in the north of England) and others were just interested in the study but did not want to join. Any new recruits to the study

were sent emails and letters as explained above and from here on followed the same procedure as those above.

Thought was given to if there were too many participants for the sole researcher to work with (over 50) or too few (under 25). If there were too many the researcher would have to omit some pupils as there it would not be possible for one researcher to visit a large number of schools. If this were the case the researcher would remove some pupils from the study by firstly removing the schools which were the furthest away from the researcher in order to save travel time. Secondly the researcher would check that there were a good selection of boys and girls that match the diagnosed rates of ASD and that the primary age range was thoroughly represented. Then the sampling described previously would be undertaken. However none of these selection had to be undertaken as there were not too many participants for the researcher to realistically work with. If there were too few volunteer participants for the study then the researcher would have to expand the study to include neighbouring boroughs in order to increase the catchment area from which participants may be drawn. The researcher would contact these schools as described above. However once again this was not necessary as the final number of participants was suitable for this study. The final total number of schools was both manageable for one researcher and capable of generating the data required to answer the research questions listed above.

Therefore all the pupils who were invited, and eventually became participants, were primary school children who were being educated in south London/Kent. All the pupils attended mainstream, state funded primary schools and were a mixture of boys and girls. All of the pupils either had an ASD diagnosis or the school believed they were in need of one and were already providing support for the pupil in the area of ASD difficulties. Both these groups of pupils were included in this study because the staff at their schools already considered these pupils to have ASD and were therefore treating them as such. The approaches they used, the resources and strategies employed were already in place. It was felt that the actual diagnosis was only a formality as these pupils were perceived by their teachers as having difficulties and ASD and therefore needed support at the moment and this was already taking place. Also by including more pupils in this way the sample of pupils in the study would increase and therefore would provide a broader set of data.

Pupils of all abilities were invited to participate and their abilities were not tested as part of this study so a wide range of pupils took part as no one was excluded from doing so. Likewise the pupils' language skills were not tested as part of this study. All of the pupils worked for at least some of their time in a mainstream classroom with other pupils their own age. Some of the pupils were removed to a specialist unit attached to their school for parts of the day. The level of classroom support for all the pupils was the same. None of the pupils had a 1:1 pupil support assistant (P.S.A.) working solely with them. Each class had a class assistant who worked with the whole class as directed by the teacher. All pupils had a class teacher and all schools had a SENCO employed. All the pupils were interviewed in their normal school environment. More exact details of the pupils selected for the case studies will follow in part three.

3.3.4: Data collection methods/instruments employed – SDQ and RCADS

Two established surveys, the Strengths and Difficulties Questionnaire (SDQ) and the Revised Children's Anxiety and Depression Scale (RCADS), were employed in order to generate quantitative data regarding the actual and perceived level social, emotional and behavioural functioning of primary aged pupils with ASD.

The SDQ was sourced from SDQ (2016). The researcher the retyped the two versions of the questionnaire into a clear format which was distributed via email to the schools.

There are 25 items to answer on the five psychological attributes previously described. All versions of the SDQ, for teachers and parents in this study, ask about the 25 attributes, some are positive and others negative. The five psychological attributes were then calculated as was the total difficulty score.

The second survey - 'The Revised Child Anxiety and Depression Scale' (RCADS – appendix 5) and the adult version (RCADS-P – appendix 3), (Chorpita et al.2000) were employed next.

The RCADS was sourced from Child FIRST (2018) and as with the SDQ the researcher retyped the questionnaire in a clear, simple way for distribution. There was the possibility that the some children, especially the younger children, may find the questions difficult to access. If the participant appeared to be struggling, the

researcher spent longer explaining the task and provide assistance with understanding if required. Following advice that a participant will be withdrawn from the study if they exhibit discomfort (Robson, 2013), the researcher stopped these surveys with five pupils. These five pupils represented 11.9% of the total sample of pupils. These pupils were finding the completion of the surveys too difficult and/or stressful and the researcher decided the questions should be discontinued. The researcher made these decisions made partly on her experience of working with primary aged children and by noticing the pupil is struggling to understand through lack of connection to the subject matter and partly through observing behaviours common to pupils with ASD exhibiting stress such as rocking or echolalia as previously described in the literature review.

Both these questionnaires consisted of closed questions. Robson (2013) suggests that eliminating open-ended questions results in the reduction of the amount of time required to be spent on analysis, especially important if there is only one researcher working on the project. Therefore a fixed set of questions were asked with exact wording to try to ensure that the questions meant the same to all the participants and as far as possible all the participants have the same experience to the questionnaires.

3.3.5: Administration

Administration of the self-completion surveys for adults (parents)

To ensure a high degree of involvement in the survey the researcher delivered the surveys to the schools in person. This avoided the faceless approach of either email or post which can result in a lower participation rate (Robson, 2013). The pupil and teacher surveys were completed with the one researcher at the participants' school as described below. Having only one researcher reduced the likelihood of different experiences of the participants.

The surveys for the parents were offered for completion at home. Although it was recognised that engaging with the participants in person would create a more personal response these situations would only be 'fleeting interactions with total strangers' (Robson, 2013, page 239). It would be unrealistic for the researcher to aim to have a rapport with every participant. Therefore it is felt that the benefits of

self-completion at home outweigh a face to face meeting. (Robson (2013) points out for a list of the advantages and disadvantages of each method of data collection from surveys see Czaja and Blair, 2005). Self-completion allows the participants to complete their responses in the privacy of their own homes hopefully creating a more confident response. Perhaps some participants may be more truthful in their responses if they are completed in a more relaxed environment instead of in front of a stranger. A lack of direct contact can be better when approaching 'sensitive topics' of which their children's difficulties may be included (Robson, 2013, page 245). There is the danger that someone other than the intended participant may have completed the survey if self-completion occurs away from the researcher. To combat this issue each participant was asked to write their name/signature at the end as a way of ensuring that the correct person, the parent, completes questions to make the survey more formal and increase the likelihood that the person writing their name is the person who completed the questionnaire.

Administration of the face-to-face surveys with children and teachers

The teachers' and children's surveys were completed face to face in their educational settings. The advantages to this approach included, for the pupil's surveys, the removal of children failing to read and understand the questions on their own. It was felt that for both the teachers and the children being in their regular setting would create a more relaxed environment from which the participants would feel more confident in offering their responses. This also offered the researcher the opportunity to end the session if necessary or to modify the line of enquiry. It also created a time for teachers to complete their surveys rather than risking the surveys being forgotten to be completed in a busy school day. In order to create the same experience to all the participants the researcher followed an interview schedule as described by Robson, (2013). Although these face-to-face interviews did take more time, it is felt that the benefits justified this.

3.3.6: Data analysis

The quantitative results from both surveys, the SDQ and the RCADS, were inputted into the SPSS programme from their original paper forms. A new

spreadsheet with the name of the child, school, age etc was created to allow further more detailed analysis to follow later.

The data was analysed at a group level, ie., that all the data from each group of participants, teachers, parents and pupils, were analysed together. Another possible way of analysing this data would have been matching up each pupil, teacher and parent response individually as undertaken in Crane et al. (2017). It was decided that the group analysing approach was the most appropriate for this study as firstly some of the respondents were missing results. Some of the pupils could not access or complete the RCADS questionnaires and there was not a SDQ questionnaire suitable for the children to complete. The parent questionnaires were also missing some responses despite many different attempts being made to include all parents' answers as described in this paper. Even though there were not many, there were some teacher responses missing also. Therefore it was felt that it would be difficult to complete analysis using the three different respondents as many pupils may be missing one set of answers. Secondly although analysing by individual across the respondents' responses would allow more close examination of each child it was felt that analysing the data at a group level gave a clearer view of the overall views of all the pupils, teachers and parents ideas. Examining pupils singularly would take place in part three for those pupils selected to take part in the case studies.

Strengths and Difficulties Questionnaire

The SDQ results can be generated either manually or through a website – Youth in Mind. Online the responses from each question were inputted into the system alongside the type of participant and gender of the pupil etc and a report created. Please see appendix 14 as an example of the type of report which could be generated this way. The data was also generated manually through the SPSS programme. This was a way in which to check the data generated and by manually working with the raw results in SPSS the researcher gained a much better understanding of the data. Therefore the SPSS programme was used for all participants in the following way.

The responses from both the participants, teacher and parent, were inputted into SPSS for each pupil. The SDQ had 25 responses from the teacher and 25

responses from the parent. Therefore each child participant, (providing the parent returned their questionnaire), created 50 responses. In order for the 50 responses to be inputted in SPSS each response was given a code. The code was as follows:

0 = not true

1 = somewhat true

2 = certainly true

After this was completed the 25 questions were examined again and some questions were found to need reversing. Questions 7, 11, 14, 21 and 25 were reversed. Using the 'Transform' and 'Recode into Different Variables' tabs these questions were recoded as follows:

0 becomes 2

1 remains as 1

2 becomes 0

Next the total subscale scores were found. Below table 3 shows the list of the different subscales mentioned above and the corresponding question numbers.

Table 3: SDQ subscales and the questions from which they are calculated

SDQ Subscale	Question Numbers
Emotional Symptoms	3, 8, 13, 16, 24
Conduct Difficulty	5, 7, 12, 18, 22
Hyperactivity	2, 10, 15, 21, 25
Peer Relationship Problems	6, 11, 14, 19, 23
Prosocial Behaviour	1, 4, 9, 17, 20

The scores for each section were calculated using the 'Transform' and then 'Compute' tab in SPSS. For example to find the emotional symptoms score the sum of questions 3, 8, 13, 16 and 24 was found. This was completed separately for the

teacher and parental data. Therefore each child had a result for each of the subscales from both their teacher and their parent providing the parents returned their questionnaire. The rather large numbers which were created in this way then were categorised manually and entered into SPSS.

In order to categorise the subscales the thresholds of each subscales needed to be applied. On the next page in table 4 are the thresholds for each subscale of the SDQ.

Table 4: SQD Thresholds for each subscale

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Within each subscale there are different thresholds depending on who the participant was who completed the questionnaire. As shown above there are:

'P' for parent

'T' for teacher

'S' for self (ie self-completed = pupil)

As the SDQ in its pupil form is unsuitable for primary aged children, this study was only concerned with the thresholds for teachers and parents. If the total score from any of the subscales fell within the 'Normal' column above it was inputted into SPSS categorised column as '0'. 'Borderline' was categorised as '1' and 'Abnormal' as '2'. Therefore, for example, a parent who scored '4' for peer problems was categorised as 'Abnormal' on this scale and was inputted into SPSS as a '2'. The researcher added the word descriptors, 'borderline' etc, as labels to this data to make it easier to understand when creating charts and tables later.

In addition to scoring the SDQ subscales the total difficulty a pupil experiences was also calculated. To calculate this score the first four subscales were added together using SPSS 'Transform' and 'Compute'. Firstly the teacher total difficulty scores was calculated and then the parent total difficulty score was calculated as shown in figure 8.

Figure 8: Origin of SDQ's total difficulty score

Participant	Sum
Teacher scores	Teacher emotional + teacher conduct + teacher hyperactive + teacher peer = teacher total difficulty
Parent scores	Parent emotional + parent conduct + parent hyperactive + parent peer = parent total difficulty

As for the five subscales, the total difficulty scale was calculated from this larger number through using thresholds. Using the threshold table in table 2 above the same coding was given:

'Normal' - '0'

'Borderline' - '1'

'Abnormal' - '2'

Again these were carefully manually calculated remembering whether the parent, ('P'), was the informant or the teacher, ('T'). Word labels were once again given as written above to provide clearer charts and tables which were created later.

Revised Child Anxiety and Depression Scale

The Revised Child Anxiety and Depression Scale generated data from three sources – pupils, teachers and parents. As mentioned above the RCADS is a questionnaire which contains 47 items which were completed in school, face to face with the pupils and the teachers, and at home for the parents. Each of the 47 items have four possible responses on a Likert scale – always, often, sometimes and never. Therefore each pupil subject generated 3 responses, meaning there were potentially 141 (47 x 3) responses (providing all participants returned (parents), or in the case of the pupils, understood and could answer the questions). Unlike the SDQ, the RCADS pupil version is suitable for primary aged children to complete and therefore was included in this study to add breadth to the data and introduce the pupil voice for analysis and comparison later.

The scoring of the responses from the RCADS can be either completed manually or through an automated system (Child FIRST, 2018). Both were completed for this study which doubled as a way of checking the data generated. Online the responses were inputted on the right hand side and on the left the gender etc of the pupil is added. The page then automatically generates the results below. Please see appendix 15 as an example.

The results were also added manually as a way in which to learn more thoroughly about the data generated through SPSS. To work manually with this data involved inputting the scores into SPSS.

Firstly each of the responses was given a code as follows:

'0' = 'Never'

'1' = 'Sometimes'

'2' = 'Often'

'3' = 'Always'

These codes were used as the responses for each of the three participants and were inputted for the 47 items.

The RCADS allows a score to be created for six different areas of anxiety in addition to a total anxiety score. The six different disorders/syndromes are listed below in figure 9.

Figure 9: Disorders and Syndromes in RCADS

Disorder/Syndrome
Social Phobia
Panic Disorder
Major Depression
Separation Anxiety
Generalised Anxiety
Obsessive-Compulsive

The data for these six subscales scales were created on SPSS by using the 'Transform' and 'Compute' tabs. Each of the 47 items in the RCADS is connected to one of the above six disorders or syndromes. To find the score for each area from each participant the responses to the following questions were added together using the scores from 0-3 based on the Likert scale mentioned above.

Table 5: Questions grouped within their subsections (RCADS)

Disorder/Syndrome	Related Items
Social Phobia	4, 7, 8, 12, 20, 30, 32, 38, 43
Panic Disorder	3, 14, 24, 26, 28, 34, 36, 39, 41
Major Depression	2, 6, 11, 15, 19, 21, 25, 29, 40, 47
Separation Anxiety	5, 9, 17, 18, 33, 45, 46
Generalised Anxiety	1, 13, 22, 27, 35, 37
Obsessive-Compulsive	10, 16, 23, 31, 42, 44

This quantitative raw data needed to be converted into T-Scores. In order to convert the raw data into usable T-Scores the researcher needed to know the age and gender of each participant (which participant provided with the responses). Using the T-Score conversion chart the raw scores were turned into T-Scores. An example of this is recreated below in table 6.

Table 6: RCADS raw scores to T-Scores chart

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Table 6 shows child responses from younger children with boys on the left and girls on the right. The different disorders and syndromes are listed across the top of the table and the raw scores down the left hand side. Therefore if a boy answered the survey in this age range and scored a raw score of 8 for social phobia (SP) then he would have created a T-Score of 46. Please see appendix 16 for all the raw score to T-Score charts. The researcher generated all six subscales for all children from all three participants where available.

These T-Scores were then categorised into the following three areas:

'0' = 'no difficulty'

'1' = 'borderline'

'2' = 'difficulty'

The researcher added the word descriptors as with the SDQ, 'no difficulty' etc, as labels to this data to make it easier to understand. The thresholds for the RCADS, unlike the SDQ, were the same for all participants as the origin of the responses had already been taken into account when generating the T-Scores. Also

unlike the SDQ, the thresholds were the same across all the disorders and syndromes. Below are the thresholds for the RCADS.

Table 7: Thresholds for the RCADS

No difficulty	Borderline	Difficulty
0 - 64	65-70	70+

Using this information each pupil had results from three responders for six areas of disorders and syndromes (providing each responder completed the survey).

The RCADS can also create a total anxiety score for each child from each respondent. This was calculated using the same routine as detailed above. Firstly all raw scores from the six subscales were added up except for the 'major depression' score. This was completed in SPSS using the 'Transform' and 'Compute' tabs.

Figure 10: Origin of the RCADS total anxiety score

Participant	Sum
Pupil scores	Pupil social + pupil panic + pupil separation + pupil generalised + pupil obsessive = pupil total anxiety
Teacher scores	Teacher social + teacher panic + teacher separation + teacher generalised + teacher obsessive = teacher total anxiety
Parent scores	Parent social + parent panic + parent separation + parent generalised + parent obsessive = parent total anxiety

Next these raw scores were converted into T-Scores using the raw score to T-Score conversion chart (appendix 16) taking into consideration the age and gender of the child and the participant who provided the responses. Labels were added. Percentages, means, standard deviations etc were found for each of the main groups – pupils, teaching staff and parents which is discussed in the results chapter.

This SPSS data was used for the selection of pupils to be included in part three of the study - case studies.

Using 'Analyze', 'Reports' then 'Case summaries' all the data from the SDQ and RCADS were able to be recorded on one sheet (appendix 17). Below, figure 11, is an example of the findings.

Figure 11: Example of SDQ and RCADS total findings

Case Summaries*					
	SDQ Teacher Total Difficulty Categorised	SDQ Parent Total Difficulty Categorised	RCADS Child Total Anxiety Categorised	RCADS Teacher Total Anxiety Categorised	RCADS Parent Total Anxiety Categorised
1	borderline	borderline		no difficulty	no difficulty
2	difficulty	difficulty	no difficulty	difficulty	no difficulty
3	difficulty		no difficulty	no difficulty	
4	difficulty	no difficulty	no difficulty	no difficulty	no difficulty
5	borderline	difficulty	no difficulty	no difficulty	borderline
6	difficulty	no difficulty	no difficulty	no difficulty	no difficulty
7	borderline	difficulty	no difficulty	no difficulty	difficulty
8	difficulty	difficulty		no difficulty	no difficulty
9	no difficulty	difficulty	difficulty	no difficulty	no difficulty
10	no difficulty	difficulty	no difficulty	no difficulty	difficulty
11	no difficulty		difficulty	no difficulty	
12	no difficulty	difficulty	difficulty	no difficulty	borderline
13	difficulty	difficulty	no difficulty	difficulty	difficulty
14	difficulty		no difficulty	no difficulty	
15	difficulty		borderline	no difficulty	
16	borderline	difficulty	borderline	no difficulty	no difficulty
17	no difficulty	borderline	difficulty	no difficulty	no difficulty
18	borderline		no difficulty	difficulty	
19	difficulty			no difficulty	
20	borderline	no difficulty	no difficulty	no difficulty	no difficulty
21	difficulty	difficulty	no difficulty	no difficulty	borderline
22	difficulty	difficulty	no difficulty	difficulty	no difficulty
23	difficulty	difficulty	no difficulty	difficulty	difficulty

We will now progress to the second part of the study – the interviews. The same structure as for part one will be followed, ie. an introduction will be followed by the design, sampling, data collection and analysis of this set of data.

3.4: Part Two Introduction

This second part of the study took the form of structured and semi-structured interviews. This part of the study was more interpretative in its origins in its attempt to understand the choices being made in the classroom and the reasons behind them.

It was understood that there may be some children in the classes selected who experience difficulties managing emotions and behaviour but do not have ASD.

As this study is concerned with the social, emotional and behavioural functioning experienced by pupils with ASD, pupils without ASD were not invited to become participants in this study. In addition was revealed that some pupils with ASD selected to participate in part one as described above were not experiencing difficulties managing their emotions and behaviour. With this in mind it was decided that from the 42 pupils with ASD included in part one, all teachers of the 42 pupils were selected to be invited to become participants in part two. In this way all participants were pupils with ASD and the widest possible range of social, emotional and behavioural functioning were included. This added to the breadth of the study.

3.4.1: Aims and research questions

Aim 2: To examine how teachers make sense and address the social, emotional and behavioural needs of primary children with ASD in class settings.

Before the final research questions were developed, as recorded at the end of this section, the following areas were considered as important focus points in this study:

- a) i) What understanding, background knowledge and training do teachers have about supporting the emotional and behavioural needs of primary pupils with ASD?

- ii) Which strategies and techniques (including assistive technologies) are currently employed in educational settings? (generalisation) How are primary teachers responding to the emotional and behavioural difficulties experienced by primary ASD pupils in the ordinary classroom?

- iii) Why do teaching staff feel these strategies work for them?

- iv) How and to what extent have teachers been supported in responding to emotional and behavioural needs of primary pupils with ASD and how can this support be developed for teachers and pupils?

- v) Do teachers use the same strategies when dealing with anxiety with children with ASD and children without ASD?

- vi) Which other strategies are used to support anxiety with children without ASD? (if applicable)

- b) i) Which strategies were not so useful?/Which strategies have the teaching staff ceased using?

- ii) How were the decisions about using these strategies and techniques made? To what extent do teachers review, develop and abandon approaches for assisting children with ASD needs?

3.4.2: Design – Structured and semi-structured interviews

The second part of this study employed structured and semi-structured interviews. These surveys were descriptive. There were some open questions to investigate the use of strategies and assistive technologies to support ASD pupils. It was important to have some open-ended questions as it allowed a more in depth exploration of the topic being covered and encouraged cooperation and rapport while making a truer assessment and contrast of what the participants truly believe (Robson, 2013 and Punch, 2005). These interviews were interviewer-led and lasted around 30 minutes in duration (appendices 4 and 18).

Figure 12: Table showing the areas covered by the interviews

Areas covered by the interviews
Teachers' background knowledge and training
Strategies currently employed
Reasons strategies work
Support teachers have received
Strategies for SEN and non-SEN pupils
Strategies which were not so useful
How decisions regarding use of strategies are made
How strategies are reviews and developed

Firstly the interviews were completed face to face with the teaching staff in their schools as explained below. The interview contained seven different sections:

1. Background information
2. Knowledge about ASD
3. Concerns about teaching pupils with autism
4. Current approaches and strategies
5. Support with approaches and strategies
6. Abandoned approaches and strategies
7. Ideas for further support or development

Within each of these seven areas, different sub headings were used and within these sub headings were used (appendix 3). This allowed the researcher to direct the questions to the heart of what was of interest to this study. In order to examine how teachers make sense and address the social, emotional and behavioural needs of primary children with ASD in class settings, the following main research questions were finally developed:

- i. *What background knowledge and training do teachers have about supporting the social, emotional and behavioural needs of primary pupils with ASD? What initial concerns did the teachers have regarding teaching pupils with ASD?*
- ii. *How are primary teachers responding to the social, emotional and behavioural difficulties experienced by primary pupils with ASD in the classroom?*
- iii. *How do teachers review, develop and abandon strategies for assisting children with ASD needs?*
- iv. *How and to what extent have teachers been supported in responding to social, emotional and behavioural needs of primary pupils with ASD and how can this support be developed for teachers and pupils?*

3.4.3: Participant sampling

Participants (the classroom teachers) had already been selected from part 1. All the teachers who work in schools where the children who participated in part 1 were approached to continue in this study.

Some pupils with ASD selected obtained very low scores for social, emotional and behavioural difficulties in part one. This was not taken into account in part two of the study as it was felt that having a wide range of responses for pupils of all social, emotional and behavioural abilities would create a broader, more thorough systematic survey. With this in mind all the teachers of all the pupils involved in part 1 of this study were interviewed for part 2 so the widest possible data could be generated from pupils across the spectrum from high levels of difficulty to no evident levels of difficulty. Therefore the data were generated from the teachers from all forty two pupils who participated in part one of this study.

3.4.4: Data collection/instruments employed

This second part of the study used a semi-structured interview to assess how the emotions and behaviour experienced by pupils with ASD are being managed in educational settings (appendix 4). This is focused upon the use of different strategies including assistive technologies to support pupils with ASD and was

undertaken through face to face interviews with the teaching staff in their schools. This was a flexible way of investigating the use of strategies and approaches in classrooms and of introducing and defining any new terms for teachers.

Interview design and coverage related to research questions

A semi-structured interview was designed related to the research questions to identify the strategies and approaches currently employed in educational settings. This generated data relating to the research questions. In addition to this the researcher also asked a range of questions concerning the teaching background of the teachers and their understanding of ASD. Listed below are the seven main sections of the teacher interview and the sub sections within these (also appendix 18).

a) General background information

- i. How many years has the teacher been teaching?
- ii. What experience of working with pupils with SEN does the teacher have?
- iii. Where was he/she trained?
- iv. Does he/she have experience of working with pupils with ASD?
- v. What qualifications does the teacher have?
- vi. What type of SEN and/or ASD CPD has the teacher received?

b) Teacher's understanding of ASD

- i. What does the teacher know about ASD? How was this knowledge formed?
- ii. What approaches is the teacher aware of which support pupils with ASD?
- iii. How did the teacher find out about these approaches?

- c) Concerns about teaching pupils with ASD
 - i. Did the teacher have any concerns about teaching a pupils with ASD?
 - ii. What is causing the pupil's difficulties? Anxiety? Any issues outside the classroom?

- d) Current approaches and strategies
 - i. Which approaches are used? Why?
 - ii. Are the approaches effective? How do you know?
 - iii. Who decides which approaches are to be used? How are the decisions made? Can other staff contribute ideas?
 - iv. Is any assisted technology used? What kind? Are they useful?
 - v. Is there a specific approach used to manage anxiety? What kind? Is it useful?
 - vi. Is this approach used with other pupils – SEN or non-SEN? Why?

- e) Support received
 - i. Who has given support to the teacher? What kind of support? How useful and frequent was this support?
 - ii. Which mode of CPD does the teacher think is the most useful? Who provided this? How was it accessed? What type of CPD would be useful?

- f) Abandoned approaches
 - i. Has the teacher tried and then abandoned any approaches? Why were these unsuccessful?

- g) Further support
 - i. In which area does the teacher feel more support would be useful?
 - ii. How could support be improved in the future for pupils with ASD?
 - iii. What new developments would be useful to pupils with ASD?

It was envisaged that a range of strategies and approaches may be mentioned during the teacher interviews. Some of these may be teacher led, others teaching assistant led and others child led. The table below illustrates some examples of strategies and approaches which were predicted. These helped to shape the recording of the teachers' answers during the interviews.

Figure 13: Strategies employed in classrooms

Instigator	Strategy
Teacher led strategies	Use of specialised assistive equipment Whole class verbal direction <i>Eg. Voice amplifier etc</i>
Assistant led strategies	Use of specialised assistive equipment Individualised verbal support <i>Eg. Social stories, individual visual aids etc</i>
Child led strategies	Use of specialised assistive equipment Child accessible resources <i>Eg. Stress toys, isolation unit etc</i>

The interview began with questions that require only facts about themselves, for example where they were trained, how long they have been teaching etc, and then opened up to an interview. The researcher quickly recorded the responses on a pre prepared sheet (appendix 18). This allowed the researcher to have a list of topics to be covered and an order to the questions. It will also allow the teachers to degree of freedom to share their experiences of strategies and assistive technologies as the questions become more open-ended. The interviews were therefore able to be modified based upon the direction that the discussion took. This provided the researcher with the opportunity of following up any ideas which the participant mentioned. In addition plenty of space is available for recording the teachers' answers as it is impossible to know in advance for how long and how much information a participant may give (Robson, 2011).

3.4.5: Administration

Due to time pressures experienced by teachers, careful preparations were made in advance of any visits. Dates for mutually convenient times for visiting were

arranged well in advance to take into consideration the time required for further visits should illness, cancellations etc occur. As only one researcher was undertaking these visits she had to be very conscious of time moving on and the timeframe she had for each section of the study. Careful planning and time preparation were needed to ensure that the one researcher could visit and conduct interviews with all the 28 teachers of the 42 pupils.

Face to face structured and semi-structured interview was a better strategy to employ for this part of the study as it helped to create a relationship between the researcher and the participants (teaching staff) prior to the observations which are planned for the third part of the study. It also allowed the researcher to adapt the questioning if required and had the added benefit of being very cost effective. The only expense incurred were the travel costs which, as the study was completed locally, were low. The only other expense was the time of the researcher. Although this was high, only one teacher could realistically be visited and interviewed during one morning or one afternoon, the information gained was worth this time expense.

The interview schedule followed the following structure:

- Researcher introduces the session (herself, purpose of the interview, confidentiality)
- Researcher explains the different types of questions which will be asked during the interview
- Researcher checks that the consent form has been signed and returned and explains that the participant can withdraw at any time. Any questions?
- Questions are asked –

Warm up – easy, interesting questions to start

Main questions – main purpose of the interview covered in a logical progression

Cool-off – straightforward, open-ended questions

- Researcher notes down answers using response codes
- Closing comments (thank you and goodbye)

The researcher noted the responses down at the time during the interview. The researcher carefully followed the interview schedule which was prepared

(appendices 4 and 18) and recorded the teachers' responses in the spaces provided (Robson, 2011).

As illustrated in appendices 4 and 18 within each of these areas, sub-areas were explored. Probing questions were also added where necessary to keep the less structured part of the interview focused on the areas of interest. The researcher asked whether some teachers' would allow their voices to be recorded as recording the interviews would act as a way of checking the responses were correctly written down later (Robson, 2011). However none of the teachers wanted to be recorded. Although this was a negative response and did not help to check responses, the researcher believed that maybe the answers of the teachers were more truthful if they were not being recorded. With no recording of their voices the teachers may have felt more anonymous and therefore were more truthful in their responses which is of the utmost importance when conducting real world research (Robson, 2011). It is suggested that as the teachers were being asked to discuss useful and not so useful support in schools this could lead to criticism of fellow teaching colleagues and support staff. Teachers may have felt more comfortable in speaking freely on these topics without there being a formal recording of their voices doing so. In addition it is suggested that as there is a focus on gaining evidence in primary schools, (of children's levels of attainment, interventions, contact with parents and external agencies etc), teachers may have felt that this would have been evidence against them of speaking about other staff negatively. Therefore the teachers would have felt more comfortable just speaking with the researcher without a voice recording as evidence. Lastly some teachers may have felt self-conscious being recorded. Therefore it was felt that as it was very difficult to gain participants for the study the researcher did not want to alienate the participants and press the issue of recording interviews. This may have resulted in some participants withdrawing from the study. Instead the researcher made written notes to the responses given at the time.

In order to keep the teachers' responses as accurate as possible the teacher gave a summary of the points which were raised by the teachers at the end and during the interview at suitable points. This allows the teacher to clarify any points of correct the researcher if he/she felt his/her ideas were not correctly recorded. This helped to ensure that the likelihood of comments being misheard or opinions

unnoticed were reduced. The researcher also made sure that the transcripts were written up into prose as soon as possible, within twenty four hours, after the interview (appendix 19). This helped to increase an accurate write up as the interview was still fresh in the researcher's mind. Interviews were therefore recorded as accurately as possible within a short time frame for subsequent analysis.

3.4.6: Data analysis

This second part of the study produced qualitative data to be analysed. This part was more interpretative in its orientation in its attempt to understand the choices being made in the classroom and the reasons behind them.

The data was generated through structured and semi-structured interviews. This qualitative data was analysed using the qualitative analysis programme NVivo. Content analysis then took place.

Content analysis is one of numerous different approaches which can be used to analyse qualitative data and its usage has increased since the year 2000 (Elo and Kyngas, 2008 and Robson, 2013). Content analysis is often used with both written documents and also non-written documents (Robson, 2013). Content analysis allows the documents used to be not affected or 'non-reactive' by the analysis and can also be an 'unobtrusive measure' (Robson, 2013, p. 349). This means that this type of analysis is useful for analysing a range of documents in a way which does not affect them and creating inferences. Robson (2013) cites Krippendorff (2004) by defining content analysis as 'a research technique for making replicable and valid inferences from texts (or other meaningful matter) to the contexts of their use' (p. 18). It was therefore thought that this type of analysis would be suited to this study. Part two and three of this study include various documents from which, following analysis, results would be linked to their school contexts.

When we consider the advantages and disadvantages of using content analysis, (Robson, 2013), it is clear to see that the disadvantages are minimal. A main advantage is that the data is 'non-reactive' and therefore can be re-analysed again to allow for reliability and replication checks. It is also a low cost option, and with only one researcher is therefore manageable. The usual disadvantages of the documents being limited or written for another purpose do not apply to this study as

the documents, ie. the interviews and observations, were written for this study in order to generate the data required to answer the research questions. Therefore the data generated was not limited or more suited to a different purpose.

Krippendorff (2006) has described how in the past content analysis has been criticised for its lack of reliability. Krippendorff (2006) cites the work of Lombard, Snyder-Ducj and Bracken (2002) to illustrate how the reliability of content analysis has been called into question and its usage not supported. However Krippendorff (2004) concluded that due to miscalculations these findings are not justifiable and defends 'the principle of encouraging multiple voices to speak through a text' (p430). It was therefore considered to be a reliable method to use in this study.

In order for a sole researcher to analyse the qualitative data generated it was planned that a thematic coding approach was to be used. Brewerton and Millward (2001) support this type of approach, qualitative data generation, as it can transform the findings to rich and multi-dimensional nature. This is a flexible approach of thematic coding which is relatively quick to employ and accessible to researchers in the early stages of research (Robson, 2013). Robson, (2013) uses Gibbs (2007) to illustrate that coding helps to define what is to be analysed and that everything which is about the same thing or exemplifies the same thing is coded to the same name. Therefore all parts of the data were coded and codes were grouped together to become a theme. The qualitative data analysis programme was used for this purpose.

Firstly the researcher transcribed all the interviews into a Word document (appendix 19). This was then inputted into NVivo under the 'Sources' tab. Each interview was typed up separately and inputted separately into NVivo to later allow each reference to be easily identified. Once all the interviews were uploaded separately the coding began using NVivo. The codes derive from both previous research and the likely answers to the research questions. Using the 'Nodes' tab each subheading from the interview schedule were inputted. Within these nodes, child nodes and grandchild nodes were added where appropriate. When this was completed it was possible to generate reports and diagrams to create an overview of each area to be investigated highlighted in the research questions. The findings will be discussed in chapter 4.

Finally we shall discuss the third part of the study – the case studies. Following the structure employed for parts one and two, firstly the design, then the sampling, data collection and analysis methods will be explored.

3.5: Part Three Introduction

The final part of the study involved case studies and generated a more idiographic or individualised kind of knowledge. After analysis of the data generated from the first two parts of the study, as described later, six pupils took part in this final section whose sampling selection is fully described later. Each pupil was observed twice in their school. An interview took place afterwards individually with the teacher and then with the pupil following the observations. The interviews were conducted after the observations to allow an opportunity for both the child and the teacher to discuss the strategies which were employed. Through open ended exploration in interviews and observations understanding was developed regarding how support is organised in primary classrooms for pupils with ASD. Some of these areas are focused upon teachers, some on children and others of teaching assistants.

3.5.1: Aims and research questions

Aim 3: To explore in depth how teachers teach and organise support for pupils with ASD who show different patterns of social, emotional and behavioural functioning in primary settings.

- a) What is the level of interaction between the pupils with ASD and adults during class lessons?

- b) To what extent are the adults (TA, teacher and SENCO) working in a partnership? How does this express itself?

- c) How included both academically and socially are the pupils with ASD into the class activities?
- d) To what extent and in what ways are the social, emotional and behavioural needs of the pupils with ASD being met in the classroom?

3.5.2: Design - Case studies

The final part of the study involved generating qualitative data through case study methods as this was the best way to investigate the management of social, emotional and behavioural issues in schools. As Hayes (1997), in Brewerton and Millward (2001), describes this approach is becoming increasingly popular in the social sciences. The individualised data generated highlighted that case studies are an effective way of not producing generalised data (Stake, 1995) and answered the research question fully. In the third part of the study generated the following data were used to cover these areas in the research questions:

Figure 14: Table showing the origin of evidence for each research question

	Observation	Teacher Interview	Child Interview
Level of interaction	✓		
Adult partnership		✓	
Inclusion in class activities	✓	✓	✓
Extent to which needs are being met	✓	✓	✓

Two observations of each pupil were undertaken followed by one interview with the teacher and one interview with the pupil. The interviews occurred with the teacher and the pupil after the observations to allow an opportunity for both the pupil and the teacher to discuss the approaches which were employed. These

descriptive, naturalistic case studies were undertaken and followed by in depth analysis of the findings. The individualised knowledge so produced would enable enhanced understanding of the contextual settings in which pupils with differing level and types of social, emotional and behavioural difficulties manage their classroom experience. Therefore the case studies focused on the use of approaches in practice. They provided the contextual setting for the approaches and illustrate what they look like in practice. They are an exploration of the experience of six pupils with ASD in five schools in London.

3.5.3: Participant sampling

The main focus was to provide an overview of current practice in educational settings in south London and to investigate whether any common themes were found. In this way effective support for different groups of children was investigated to improve the educational experience children with ASD have in their classrooms as shown in table 8.

Table 8: Table showing sampling selection

Initial invitations	Part one - questionnaires	Part two - interviews	Part three – case studies (observations and interviews)
	All positive responses to invitations		
6 boroughs – Croydon, → Wandsworth, Lambeth, Southwark, Merton, Lewisham/Kent	42 pupils, parents and teachers →	The same 42 pupils’ teachers →	6 pupils and their teachers selected from responses in part one

The same schools were used in part three as were used in parts one and two. This not only saved time in researching other settings for the sole researcher but it also provided continuity in the study. These pupils had already met the researcher in part one and therefore were familiar with the researcher. This did help to create a limited rapport with the pupils and a familiarity which helped the pupils to be more at ease. The teachers had already met the researcher in parts one and two and

therefore were familiar with the research study and were already committed to taking part. The data generated helped to broaden what had already been discovered in part two. It created a more in depth knowledge of the ways in which pupils are supported in schools.

In order to select the participants, two options were considered. One option which involved participant sampling by selecting the two highest scoring, two middle scoring and two lowest difficulty scoring pupils would be selected from the results in part one across both measures, the SDQ and the RCADS. The other option was to select the pupils who scored the highest levels of difficult in the first part of the study to take part in this final section. However, by taking the latter route all the pupils selected would all be experiencing within the same range of social, emotional and behavioural difficulties. Instead by selecting manually the pupils at the top, middle and bottom of the range, the study would have a wider coverage of pupils and therefore the data generated would be of a greater breath and of more interest so this option was chosen prior to the commencement of the case studies. Therefore it was decided that six pupils would be selected for the final part of the study however these would be selected from across the range of results collected in part 1.

After the results from the SDQ and the RCADS were analysed using SPSS a case summary report was generated (appendices 17 and 20). This case summary clearly indicated which pupils were experiencing 'no difficulty', 'borderline' difficulties and 'difficulties'. The two pupils who scored the highest across the surveys were selected as were the two pupils who scored in the middle and the two pupils who scored the lowest. In this way, as described above, a range of social, emotional and behavioural functioning were added to the study and therefore created a broader set of data concerning the strategies and approaches currently being used. Pupils who had a full set of responses, ie parents, teachers and pupil replies, were considered as a focus for a case study.

Table 9: Table showing the number of full and missing survey responses

Number of full responses	Number missing parental responses	Number missing teacher responses	Number missing pupil responses	Total possible number of responses
24	13	3	5	42

Table 10: Table showing the number of responses

Number of responses	Number of cases
Full set	24
One response missing	16
Two responses missing	2
Three responses missing	0

As mentioned above the five results were taken into account – from the teachers (x2), pupils and parents (x2) from both surveys. If there was a tie then the teacher results would take precedence over the parent responses as it was felt the teachers have a greater knowledge of how the pupil reacts to the classroom environment as they are in the classroom with the pupil rather than the parents. This decision was taken as this study was interested in the pupils' educational experience and not their home experience. When selecting the pupils with the highest level of difficulties the researcher selected those who scored the most 'difficulty' ratings as described above. There was a total number of four pupils who fell into this category. By taking into account the parental responses as well this number was reduced to two. When selecting the pupils who scored in the middle of the scales, the pupils who scored a 'borderline' rating by teachers were selected. This resulted in thirteen possible options which was reduced down to two when taking into account the parental responses as well. It was planned that if there was a tie then the number of girls and boys should be taken into account. This would ensure that there would be a good range of pupils involved in the study – not all girls or all boys. The pupils who scored the lowest 'no difficulty' ratings were selected in the same way using the teachers' scores first. There were again several options, however this time during selection the researcher took into account gender. As there was only one girl selected so far the researcher chose another girl for this group to ensure the two out of the six pupils were girls and therefore better reflected the diagnosis rate of ASD.

A letter was sent out to remind the schools and the parents of the study (appendices 21 and 22 respectively).

3.5.4: Data collection/instruments employed

Naturalistic case studies were then undertaken. The researcher arranged visits to the schools of the pupils selected as described above. The researcher went to the classroom and observed the pupil in their normal routine on two occasions. Filming was not used as this would have been intrusive to the classroom environment, required a good deal of time to set up, would require parental permission from all the children in the class and chiefly would have altered the normal classroom setting which was what this study wished to observe. The only stipulation for the second observation was that each pupil was engaged in a different activity or lesson than that of the first observation. This stipulation was to ensure that the pupils were observed in different lessons in case a pupil only behaves in a certain way in a certain lesson as the pupil may like or dislike a particular activity or lesson in school. This also added breadth to the study as a broader range of experiences might be observed from different lessons. Therefore the observations were consistent for each pupil as they were observed completing regular tasks and activities in school with which they are familiar. As is usual in primary lessons each lesson contained different focuses, ways of learning and interaction. Some individual, group and whole class learning was observed within lessons. Therefore the observations were consistent in their approach and content for each of the pupils. Following the observations the researcher held one interview with the class teacher and one interview with the pupil separately to discuss what had been observed and their ideas about the support used and available.

Design of different data collection methods

The classroom observations were completed using a prepared observation sheet. The researcher based the observation sheet on the work of Sigman and Ruskin (1999) model and the Webster and Blatchfold (2013) model. Classroom management involving strategies and approaches discovered in part two were

investigated during the case studies and planned into the prepared observation sheet. This was completed in the following ways.

The researcher firstly used NVivo to highlight the different types of approaches and strategies which the teachers described as being used in their classroom from part two. Using these responses the researcher created a list and discovered that it was very long. Therefore each of these approaches and strategies were divided into three sections as detailed below – observable primary approaches, observable additional support in class approach and observable additional support while withdrawn from class approach. Some of these approaches may be employed with any pupil in a primary classroom or as a whole class approach.

‘Observable primary approaches’ were approaches which are in common usage in primary schools in England not exclusively used with pupils with ASD or indeed with pupils with general SEN. Approaches listed under ‘observable additional support in class’ are approaches which are designed to help the pupil access the curriculum and break down barriers to learning within the classroom, itself. The final group – ‘observable additional support while withdrawn from class’ are approaches which are undertaken when the pupil is withdrawn from his/her classroom and his/her peers to complete their work or learning. Sometimes the pupil may be on his/her own or sometimes in a small group with others.

Within each of these sections an additional criteria was applied – ‘specific’, ‘middling’ or ‘general’ as indicated below. ‘Specific’ was applied to approaches which were specific to the pupil being observed. No other pupil was engaged in this approach and the approach was developed solely for this pupil. ‘Middling’ was applied to approaches which may be used with a group of pupils of similar ability for example. These approaches aim to help the pupils to achieve via small group direction. The final column – ‘general’ were approaches which could be addressed to the whole class.

Figure 15: Table showing possible observable descriptions of approaches categorised

Observable Primary Approach	Specific	Middling	General
use of home-school contact book	✓		
'Clicker 6'	✓		
teacher talk about topics of interest to the pupil	✓		
pre-teaching of a topic	✓		
calm voice/reassurance from an adult		✓	
explanation of the day's routine		✓	
different work from peers which interests this pupil		✓	
checking pupil can repeat what they have been asked to do		✓	
repeated clear instructions			✓
calling pupil's name			✓
shared behaviour code with the pupil			✓
sanctions applied			✓
positive reinforcement/praise			✓
'Forest School' style learning			✓
write worries down and put them in the worry box			✓
Observable Additional Support in Class Approach	Specific	Middling	General
visual clues, eg visual timetable, picture supports, post-it reminders, cubes and cards	✓		
stress toys including ear deadeners, 'Play Doh', 'Blu Tack' and wobble cushion	✓		
sensory aids	✓		
task boards	✓		
teacher ignores pupil and allows them to self-select and self-soothe	✓		
pupil has the opportunity to write feelings and responses	✓		
distract pupil to another focus	✓		
touch typing instead of hand writing responses	✓		
ICT programmes/ iPad apps or laptop games		✓	
refocus to quiet activity, eg. colouring in		✓	
use of talking partners/speaking buddy		✓	
countdown by adult/time reminders		✓	
extra time given to respond		✓	
reward charts/time			✓
Observable Additional Support while Withdrawn from Class Approach	Specific	Middling	General
'TEACCH' programme	✓		
isolation unit	✓		
Makaton	✓		
'Attention Autism' programme	✓		
removal of pupil to work with 1:1	✓		
extra PE session	✓		
break from work/movement breaks		✓	
comic strips		✓	
social stories		✓	
ELSA support		✓	
mindfulness activities, eg, stretching, listening to music and breathing techniques		✓	
SALT therapy		✓	
'Relax Kids' programme		✓	
removal from class/to a quiet area alone			✓
removal to working in a smaller group			✓

These results were then transposed into a more succinct table from which the observation schedule was drawn.

Figure 16: The range of approaches expected to be observed

	Primary school typical approach	Additional support approach	
		In ordinary class	Withdrawal – other setting
Specific level of description	Home-school contact book 'Clicker 6' Teacher talks about topics of interest Pre-teaching of a topic	Visual clues Stress toys Sensory aids Task boards Ignore pupil to self-select and self-soothe Pupil writes down feelings and responses Distract pupil to another focus Touch typing instead of hand writing responses	'TEACCH' programme Isolation unit Makaton 'Attention Autism' programme Working with 1:1 Extra PE
Middling level of description	Calm voice/reassurance from an adult Explanation of the day's routine Different work form peers Checking pupil can repeat instructions	ICT programmes/iPad/laptop Refocus to another area Talking partners/speaking buddy Countdown by adult/time reminders Extra time given to respond	Breaks Comic strips Social stories ELSA support Mindfulness activities SALT 'Relax Kids' programme
General level of description	Repeat clear instructions Calling pupil's name Shared behaviour code Sanctions applied Positive reinforcement/praise 'Forest School' style learning Writes worries down and put them into a worry box	Reward charts/time	Quiet area location Work in smaller group

From the above a chart was created (appendix 23). After considering different options (appendix 24), a final schedule was developed (appendix 25) which

was used in the observations. This allowed a quick recording of the approaches observed in the classroom environment.

Observations of children (Sigman and Ruskin, 1999) in their settings provide a useful snapshot of their daily reactions to these stimuli. The use of observations in this study at different times when pupils with ASD experience social, emotional and behavioural difficulties, perhaps during transition periods or assemblies, helped to provide a useful snapshot of the children's reactions at these times and the different strategies currently being employed in schools.

The six pupils selected were each observed twice in class using this observation schedule (appendix 25). The interviews then took place followed by in depth analysis of the findings (Robson, 2013). The individualised knowledge gained developed the understanding of the contextual settings in which pupils with a range of social, emotional and behavioural functions manage their classroom experience. Therefore the case studies focused on the use of approaches in practice. They provided the contextual setting for the approaches and illustrate what they look like in practice. They were an exploration of the experience of pupils with ASD in English classrooms.

The observations themselves were partly based upon the Sigman and Ruskin (1999) model. The researcher was present in the classroom for thirty minutes for each observation. Based upon Sigman and Ruskin's (1999) structured observation plan, continuous coding was used throughout the thirty minutes in the classroom. Webster and Blatchford (2013) employed a systematic observation schedule which described pupil activity on a minute-by-minute basis. Their aim was to generate a description of behaviour which was rigorous, objective and replicable (Webster and Blatchford (2013). Their method was adapted from schedules used in the earlier Class Size and Pupil Adult Ratio (CSPAR) and Deployment and Impact of Support Staff (DISS) projects (Blatchford, Edmonds, and Martin 2003; Blatchford et al. 2009a). It was decided that a combination of both observation schedules would be useful in this study. Webster and Blatchford (2013) use a system whereby they would observe for the first 10 seconds of every minute. It was felt that it would be better for the researcher to observe for the first thirty seconds of every minute and note down what was observed for the last thirty seconds of each minute. In this way the researcher would have a fuller idea of the approaches and strategies being

employed in the classroom. The thirty seconds for recording was an ample amount of time to note down what was observed. The following are the headings concerning which observations were completed. (Appendix 25 shows the systematic observation schedule in full.)

- a) Location of the pupil
- b) Pupil context
- c) Pupil interactions
- d) Description of the approaches employed
- e) The type of behavior observed
- f) 6 – point scale regarding the task engagement of the pupil.

As mentioned above and shown in appendix 24, pupil context and interaction could be recorded in three different ways. Below is option one which, following adaption, was employed:

Figure 17: Recording of pupil context and interactions

Option One – Pupil context and interactions could be recorded as highlighted below:

Interactions	0 = with peer 1:1
	1 = with peers in a group
	2 = with peers in whole class
	3 = with teacher 1:1
	4 = with teacher in group
	5 = with teacher in whole class
	6 = with teaching assistant 1:1
	7 = with teaching assistant in group
	8 = alone

Following Webster et al. (2013) the direction of the interactions are not to be recorded here. Webster noted that there were far more examples of children interacting with the observed pupil than the observed pupil interacting with other children however all of these interactions were grouped together and simply recorded as peer interaction.

The best way in which to record interactions would be an adaption of option one. The interaction and pupil contexts were separated into two different foci. These options allowed the researcher to note down the pupil context first and then the interaction with only a short list of options from which to choose. This was important when working in a tight timeframe of thirty seconds and it allowed an easier, more accessible coding arrangement while still gaining valuable information concerning both interaction and initiation.

Through these observations, understanding was developed in the following areas:

- a) Where is the pupil located? (eg. In class, outside class in corridor/another room)
- b) What is the pupil social context? (eg. In whole class, in a group, 1:1)
- c) What interactions is the pupil experiencing? (eg. With an adult, with peers, alone)
- d) Which approaches are being used? (eg. None, repeating verbal commands, assisted technology)
- e) What type of behavior is being observed? (eg. Rocking, echolalia)
- f) What affect does the teaching have on the pupil? (marked on a 6-point scale)

The interviews followed after the systematic observations. Through open ended exploration in interviews with teachers and pupils the following areas were explored. Some of these areas focused upon teaching staff and some on children.

- a) Teaching staff collaboration - What is the relationship between the teacher and the teaching assistant? How do they interact and work together
- b) How the school is responding to the pupil's needs
- c) What helps the pupil to learn? What could be changed?
- d) What is the pupil's perspective concerning their educational experience?

The two interviews, teacher and pupil, were created based upon the research questions. Appendices 26 (teacher) and 27 (pupil) are the interview schedules which were used at this point in the study

Using the above instruments, systematic observations and interviews with the teachers and pupils, different data was generated. Figure 18 illustrates the origins of both quantitative and qualitative data in the final part of this study – the case studies.

Figure 18: Case study data

Type of Data	Data Source
Quantitative	From observations
Qualitative	From interviews with pupils and teachers

3.5.5: Administration

Following the analysis and selection of the participants the researcher emailed the appropriate schools and explained to the teachers which pupils had been selected and the reasons for their selection (appendix 21). In addition the teacher was asked to forward a letter to the parents of the pupil informing them of the development of the study and how it affects their child (appendix 22). Contact details were given again in case the parents had changed their mind concerning their child's participation in the study and to provide them with an opportunity to ask questions if required.

The researcher visited each of the pupil's schools and observed the pupils twice for thirty minutes. (Appendix 25 shows the observation schedule). Examples of the completed observation schedules can be found as appendix 28. Each child was observed on two occasions which was feasible time wise and allowed a broader study to be undertaken.

The use of systematic observations as part of the case studies has been employed by various researchers as a way in which to measure pupils' activity. Indeed Webster and Blatchford (2013) found that 'despite criticisms of the validity of data collected using systematic observation (Delamont and Hamilton 1986), this method can be valuable where data are needed on relatively easily observed activities and behaviours (Croll, 1986;McIntyre and Macleod 1986)' p. 6. Therefore the use of systematic observations in the case studies is well established and was used in this study. Observations in the final part of this study were considered to be

a valid and useful way in which to generate data with which to answer the research questions.

Following the observations the teachers were interviewed one-to-one. The teachers left their classes and spoke with the researcher in a quiet area in their school. As described in part two none of the teachers wanted to be recorded so the same precautions concerning the accurate recording of responses employed in part two were utilised again. The researcher noted the teachers' responses onto a prepared sheet (appendix 26). Speaking one-to-one encouraged a more truthful response and had the added benefit of allowing the researcher to adjust the questioning if required by the participants responses (Robson, 2013).

During the pupils' interviews, appendix 27, the pupils were shown to a quiet area by a member of their schools' staff. Sometimes this was the SENCO or their PSA. The researcher briefly reminded the pupil of who she was and the research being undertaken. All of the pupils remembered and spoke about the researcher's last visit which made a comfortable start for the pupils to the interview.

3.5.6: Data analysis

Each observation was typed up and saved for each pupil (appendix 28). These sources were then inputted in NVivo and thematic coding took place. As in part two responses were grouped using the 'node' function and from this it was possible to generate quantitative data from which percentages could be found. This provided information concerning the following:

- Location of pupil
- Pupil context
- Interactions
- Approaches used
- Behavior observed
- Interest of pupil

Both the teacher and pupil interviews were also transcribed following the researcher's visit to the schools. These were again inputted into NVivo. The

responses were coded into the areas of interest according to the research questions. Lists were generated regarding all the areas of interest for example the types of strategies and ideas for further development. Both sets of data were compared to help to identify any discrepancies between the teachers' and pupils' perceptions of useful strategies and what was observed. Copies of the data generated from part three are included as appendices 29 (pupil) and 30 (teacher).

3.6: Pilot study of data collection

This research project began with a pilot study to iron out any unforeseen problems which may arise. Historically a pilot study or a 'dummy run' (Robson, 2013) have been extremely useful for researchers as they highlight any potential problems which can be worked upon prior to embarking on the main bulk of the project (Bryman, 2008). The pilot study took place within the borough where I work. The advantages of piloting in this area included a greater likelihood of acceptance to the study, short travelling distances and experience of how best to approach the participants in addition to the advantages listed by Robson (2013) of knowledge of the settings (quoting Lofland, Snow, Anderson and Loftland, 2006) and courtesy of colleagues for example.

It was planned that all parts of the research study (parts 1, 2 and 3) would be piloted and undertaken in one borough initially. Therefore as each different part commenced the researcher began in the same borough in which she worked. It was felt particularly useful to include a pilot in this study as this research study involves surveys and having the opportunity to adapt these when required was useful. The pilot studies provided the chance to highlight mistakes or omissions from the surveys and interview schedules. In addition the pilot studies allowed the researcher to explore whether the mixed methodologies were actually capable of bring about answers to the research questions. There were some slight alterations concerning the timings in part one as this section took much longer than had originally been predicted. Completing a pilot study first allowed time for these changes to be made prior to the main study being undertaken.

Robson (2013) describes the difficulties of piloting case studies including geographical location or accessibility. Although these were not predicted to be

concerns with my pilot there were other concerns about the questions and the possibility of omissions. Therefore the benefits of conducting a pilot study was time well spent. Any difficulties experienced or omissions that may have been uncovered could have then be reified prior to the main study being undertaken (Bryman, 2008). In this study the length of the observations may have needed to be altered and the wording of questions may have needed to be changed however this was not proven to be the case. Piloting the study did however increase the confidence of the researcher when conducting research in new places and with new participants which allowed the study to progress quickly and with minimal misunderstandings. One misunderstanding or mistake which was eradicated was how to explain how long the researcher would need with each participant. As schools are very busy and cannot afford to have pupils and teachers out of class for long, the experience from the pilot studies allowed the researcher to provide a reasonably accurate estimate of timings for future participants when required. In addition through the pilot study it was discovered that the amount of time spent contacting the schools, receiving permission and arranging a time to visit was immense. Some schools were very eager to join and chased up consent forms however even with these schools arranging visits was a very slow process. The only change to the actual school visits was the timings. The completion of the surveys took quite a while and therefore it was understood that only one school could be scheduled for a visit per morning or afternoon.

Table 11: Pilot schedule for part one

Activity	Timings planned for pilot study	Timings to be altered for the main study
Contacting schools and arranging visits	2 weeks	4 weeks
Assessing individual pupil	10 minutes	10 minutes
Assessing teachers' perspective of pupil	15 minutes	30 minutes
Time allowed for parental return of questionnaires	2 weeks	2 months

3.7: Ethical considerations including risk to the participants and to the researcher

As this research study involved working with real people in order to carry out real world research there are ethical considerations which were taken into account when planning. It was imperative that all participants were fully aware of what they have consented and had time to consider their involvement while having the opportunity to withdraw at any time. The possibility of creating stress, harm or anxiety to the participants was explored and the following steps were taken to reduce the likelihood of these negative affects occurring in each of the three parts of this study. The guidelines from the British Educational Research Association (BERA, 2011) were also accessed and followed. (These were updated in 2018 but this research pre-dates this, so the previous guidelines are what guided this study.)

It was also important to remember that there is always a risk to the researchers themselves when undertaking research (Robson, 2013) whether this takes place while carrying out field work (Lee-Treweek and Linkogle, 2000 in Robson, 2013) or in one-to-one situations (Kenyon and Hawker, 1999 in Robson, 2013). Although the risk in this research study was low, the following areas were examined in order to minimise the already low risk posed to the researcher.

Parts 1 and 2: Pupil, parents and teaching staff surveys and interviews with teaching staff

All the above participants were informed via the consent letters (appendices 10, 11 and 12) regarding the aims of the project and why their input is sought. As this study involved working in schools, the consent of both parents and teachers was sought. A description of what their participation involved was shared and the opportunity to ask questions was available. The description was of a reasonable, manageable length as not to overwhelm the participants. This was particularly important when explaining and gaining the consent of the pupils.

Gaining consent from vulnerable groups such as children can be a challenge bearing in mind that they may have difficulty giving informed consent as they may not understand what will be involved (Robson, 2013). However Robson (2013) does explain that James, Jenks and Prout (1998) found that children can speak for

themselves and can provide useful information as competent witnesses. Therefore careful wording and simple oral explanations of what was required as a participant was explained to the pupils in addition to their parents' consent. It is suggested that this aided the pupils' understanding better than just sending a paper consent form. All participant's consent to participate was voluntary and was entirely their own decision (Bryman, 2008). Therefore all participated freely and understood in what they were engaged.

A period of time was given for the participants to consider whether or not they would like to take part. Different words and layouts for the different groups whose participation was being sought was considered (for example the pupils' information was shared verbally). For all participants it was made explicit that they could withdraw their participation at any time. An informed consent form was then administered to all participants. Prior to the survey being conducted with the pupils, the researcher asked if they had any questions or concerns and explained their right to withdraw at any time from the study.

All questions in the surveys and interviews were prepared in advance with much thought regarding the feelings of the participants. Careful consideration was given to the ethical issue of asking children to engage with their feelings towards stress and the anxiety parents may feel about becoming part of a study. Any possibility of harm, distress or annoyance was minimalised through careful wording (Robson, 2013 and Bryman, 2008). This was part of the pilot testing and therefore allowed the possibility of changes to be made after the pilot study accordingly if required. As with the consent form, the surveys and interviews was also adapted to suit the ability level of the pupils taking part (Bryman, (2008). As previously mentioned all participant responses were anonymously presented (Bryman, 2008 and Punch, 2005). It was also made clear through the correspondence with parents and teachers that the aim of this study is not to pass judgement on its participants but to create a broad snapshot concerning the management of autistic children's emotions and behaviour in primary schools in south London.

The risk of distress to the researcher when conducting the surveys with the above participants was minimal. When working with pupils the researcher conducted the interviews with a member of staff from the school present. This possibly helped the pupils to feel more secure and had the added bonus of

supporting the researcher in engaging the pupil. The presence of a member of staff also protected the researcher from any possible allegations of misconduct. The researcher knew where the school reception office is in case of an emergency and carried a charged mobile phone. School protocol regarding pupil/adult interaction was followed. As the researcher is a primary school teacher and works for a local university she has already been DBS checked for both of these roles. Every effort was made to protect all participants from distress. If a child became distressed during the interviews or if the researcher found the questions exposed issues in coping with the pupil then it was planned that the study would cease. This only happened with the five non-verbal pupils who were unable to respond during the discussion. Parental surveys might have highlighted their child's anxieties and therefore might have become distressing to them. If this were the case the parents could have opted out at any time. As teachers were participating freely in their work environment it was anticipated that the possibility of distress to this group was low.

Part 3: Case studies

As the same educational settings and participants were used in this final part of the study, consent had already been received and the guidelines above followed. It was suggested though that the researcher wears a badge saying 'Researcher' to remind people that they are being observed for research (Wiles, Heath, Crow and Charles, 2006 in Robson, 2013) but this was a distraction for some of the pupils. Covert research did not take place as it was felt that this is in opposition to the principles of informed consent (Robson, 2013).

In addition to the above ethical considerations, anonymity was also offered to the participants and schools as suggested by the UK's Data Protection Act (1988) and the Ethical Practice in the Social Research Online journal. Personal details of the participants were kept confidential with a code used instead of real names. The data generated was securely stored and deleted after the findings have been analysed. Paper recorded data was kept securely locked in the researcher's care and later during analysis was stored on a password protected laptop. Prior to beginning this research, the project was submitted to the ethical review board and committee at Exeter University for approval.

At the end of the study, a summary of results will be forwarded to each school which participated to be disseminated to the participants if desired.

Please see appendices 31 and 32 for a copy of the 'Certificate of Ethical Approval' and the complete ethical form.

3.8: Strengths and limitations of the study

Please turn to the next page for figure 19.

Figure 19: Overview of the Strengths and Limitations of Each Part of the Study
(edited from Robson, 2013)

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3.9: Risk analysis – Risk to the study

This section briefly outlines the planned perceived risks involved when undertaking this research study including the likelihood of risk and how this was minimalised.

The main risk to the on time completion of this project concerned the access to the participants which shall be discussed first.

Schools: Access to the sample might have been a problem due to the high number of such request to schools and the busy nature of these educational settings. Contact was therefore made with schools known to the researcher where links have already been made to encourage participation. The timing of contact was also carefully considered. Invitations to participate were made early in the school year plenty of time in advance of visits. Contacting schools early in the year also helped to increase the probability of a favourable response as schools had not committed themselves to other projects as they may do throughout the school year.

Teachers: There might have been issues with teacher participation. These might have included a reluctance to take part due to time restraints which is a reason why invitations to participate were sent early in the academic year. Some teachers might have feared the ethical implications of allowing another adult into their classroom and observing pupils. The researcher explained the reasons for the study and provided the opportunity for any questions to be asked prior to participation to allay these fears.

Parents and pupils: Some participants might not have been willing to participate for a variety of reasons (nervous about answering questions, too busy etc) and therefore a low response rate might have occurred. With this in mind this project contacted many schools within different boroughs to increase the likelihood that a large enough sample was available. Self-completion surveys were provided to enable participants to complete them in the privacy of their own homes at a time convenient to them. Explanations regarding the purpose of the study and the opportunity for any

questions regarding this project were provided with the aim of increasing participation. In addition there might have been problems with communication between the participants and the researcher. Therefore any written communication to the participants was provided in addressed envelopes to the schools thus minimalising the risk of misplaced documents in the school office.

Chapter 4: Results

4.1: Introduction

As described in the previous chapters this study was undertaken in three parts which followed on systematically from the last. In this chapter each of these three parts will be examined in turn and the ways in which the study developed following each part's findings will be explored.

Each of the three parts had a different aim and different research questions. This chapter will now explain how these aims and research questions have been answered following the data collection and analysis.

Part One

Aim: To research the reported level of social, emotional and behavioural functioning of primary aged children identified as having ASD reported by the pupils and their parents and teachers. What pattern of social, emotional and behavioural difficulties and prosocial behaviour are found in a group of primary aged pupils with ASD from different perspectives?

4.2.1.1: RCADS pupil, teacher and parent results

Levels of social, emotional and behavioural difficulties (including anxiety and depression) reported by pupils with ASD attending primary settings.

Levels of specific kinds of social, emotional difficulties (fears, anxiety, depression etc) reported by pupils.

Each of the six subsections within the RCADS (social phobia, panic disorder, major depression, separation anxiety, generalised anxiety and obsessive compulsive) were analysed followed by the overall anxiety scores for each participant – pupil, teacher and parent. These have been included as appendix 33. The pupils' results are

provided first, followed by the teachers and then the parents. The significant differences between the pupil, teacher and parent responses will now be explored.

Pupil Results

Table 12 is an overview of the pupil, teacher and parent results. The means are the average T – scores for each of the different subareas.

From table 12 below it is now possible to see that overall the highest level of self-reported difficulty was in the area of panic disorder with social phobia and generalised anxiety being the least reported.

Overall in all categories the majority of pupils self-reported no difficulties. As shown in the mean column all results (T scores) were below 65 therefore indicating no difficulty in any of these areas. As explored in chapter 4, T = 0 – 65 is the no difficulty category, T = 66 – 69 is borderline and T = 70 and higher is classified as difficulty (Chorpita, B. et al 2014). All of these results were far below 65 with the highest mean, panic order, at 58.6. Therefore the majority of the pupils do not report that they have any difficulties.

When examining the differences between the levels of difficulty within each area it is possible to see that the area with the greatest self-reported difficulty is also panic disorder with 21.6%. The pupil's self-reported separation anxiety and generalised anxiety tied as the next highest level of difficulty although generalised anxiety scored the lowest in the mean results. The generalised anxiety results are scored this way as the number of borderline difficulties was only one and the rest of the pupils self-reported no difficulties. This resulted in a wide distribution and most pupils falling into either the no difficulty or difficulty group. Therefore the pupils' had the strongest views in the generalised anxiety group. This is dissimilar to the panic disorder, major depression and obsessive compulsive results which, although most are within the no difficulty area, are more evenly spread between borderline and difficulty. The least reported difficulty was in the area of social phobia where a very large proportion of pupils (89.2%) believed that they do not have any problems.

Most of the pupils who were invited to participate took part in the study – a total of 37. Only 5 responses are missing which was due to the pupils' being unable to

respond to the questions. All of the pupils visited were given the opportunity and none of them declined to take part out of choice. The pupils who could not answer the questions were from different schools, both boys and girls and spread across the age range so therefore no single group of pupils responses are not included in the set of results. The mode average can be seen in Table 12's T score mean column. As all the responses were under 65 it illustrates how overall the most common response from all the pupils was that they felt they had no difficulty in any area including total anxiety. Therefore it is possible to conclude that although some pupils identified difficulties, the vast majority of the pupils generally feel that they do not have any difficulties in any areas. Across the scales it is quite clear that the majority of pupils do not believe they have any difficulty. Whether the pupils are not aware of these difficulties or do not perceive their behaviour as containing difficulties will be discussed in chapter 5.

Teachers

Levels of social, emotional and behavioural difficulties (including anxiety and depression) reported by teachers with ASD attending mainstream or special needs settings.

Levels of specific kinds of social, emotional difficulties (fears, anxiety, depression etc) reported by teachers.

Table 12 also shows the responses from teachers regarding their perceptions of the difficulties the pupil with ASD in their class experiences at school.

From table 12 it can be seen that overall the highest level of teacher-reported difficulty was in the area of major depression with generalised anxiety being the least reported. This is similar to the pupils' results as generalised anxiety was the lowest scoring mean average as well and major depression was the second highest scoring. Comparing teachers and pupils views (table 12) it is clear that the teachers have a higher mean result in every area than the pupils with the exception of panic disorder which is only just higher in the self-reported pupil results at 0.2 more. These result may imply that either the pupils do not perceive a problem or are unwilling to admit

such. Perhaps the teachers are picking up on difficulties as they compare the pupils to the rest of the class – this will be discussed further in the next chapter. It is interesting to note that as with the pupil results, generalised anxiety has very few responses in the borderline category – in this case none at all. As both the pupils and the teachers have identified pupils in a polarising way – nearly everyone (minus one) has either difficulty or not in this area with no maybe area in between this must be a very obvious difficulty to be aware of in the classroom. As with the pupil responses the mode average fell in the ‘no difficulty’ category as the results were all under 65 in the T-score column in table 12. This indicated that most teacher stated that the pupil with ASD in their class did not have any difficulties in any areas.

The rate of teacher responses was very high from the sample selected. Only three responses are missing. These three teachers were from different schools with different aged pupils in their class which, like the missing pupil responses, should not therefore affect the breadth of the study. The reason for non-participation in the study was due to a reported lack of time. The teachers could not be excused from the class to complete the questionnaires and did not wish to use some of their planning, preparation and assessment (PPA) time when they are not in class to do so. As with the pupil responses the mode average fell in the ‘no difficulty’ category as they results were all under 65 in the T score column in table 13. This indicates that most teachers stated that the pupil with ASD in their class did not have any difficulties in any areas.

Parents

Levels of social, emotional and behavioural difficulties (including anxiety and depression) reported by parents with ASD attending mainstream or special needs settings.

Levels of specific kinds of social, emotional difficulties (fears, anxiety, depression etc) reported by parents.

Table 12 also contains the results from each of the six sub areas of the RCADS for parents.

The highest mean level of parental reported difficulty was in the area of major depression with obsessive compulsive being the least reported (appendix 33). Major depression was also the highest mean level reported by teachers and the second highest reported by pupils suggesting that this is an area in which pupils with ASD struggle. 11 children were evaluated by parents and teachers as being in the difficulty range for 'major depression', compared to only 4 pupils. All of the areas reported by parents are higher than those reported by pupils and teachers (with the exception of separation anxiety results for teacher and parents which are exactly the same (62.7%). These higher mean averages are reflected in the number of pupils reported to have difficulties. In the difficulty column according to parents nearly 40% of children are experiencing major depression. The mean result for parental perception of major depression scored 68.6 which is the only score throughout the RCADS results which falls within the borderline category and very close to the clinical threshold. This would indicate that the parents are often observing major depression in their children. This is also shown in table 18. Generalised anxiety again, as with the pupil and teacher responses, has very few (only one) child in the borderline category highlighting that most children either have an observable difficulty or not.

When considering the total anxiety score 8 parents and 6 teachers evaluated a child's total anxiety to be within the difficulty range and 6 pupils' self-reported total anxiety in the difficulty range. This again follows the pattern of parents' scoring their children's difficulties much higher than teachers.

The T score column in table 14 highlight that for each sub area the mode average scored a 'no difficulty' rating (under 65) with the exception of major depression which scored a mode value of 'difficulty'. The parental responses as shown in table 12 highlight that there were far more parental responses missing than that of pupils or teachers. The parents were given the opportunity to complete the questionnaires alone or with the researcher, on paper or online. Emails were sent as a reminder to the parents directly and to the school. Some parents felt they did not have the time to complete the questionnaires but would like their children to take part in the study without their parental input. As with the missing pupil and teacher responses, the missing parental responses came from a variety of schools and their children were of differing ages. As a cross section of the parental responses were received from a

mixed representation of their children - boys and girls, different schools and different pupils' ages, results would not be dominated by one area for example age group. (All the RCADS results are shown in appendix 33).

4.2.1.2: Comparison across the RCADS perspectives

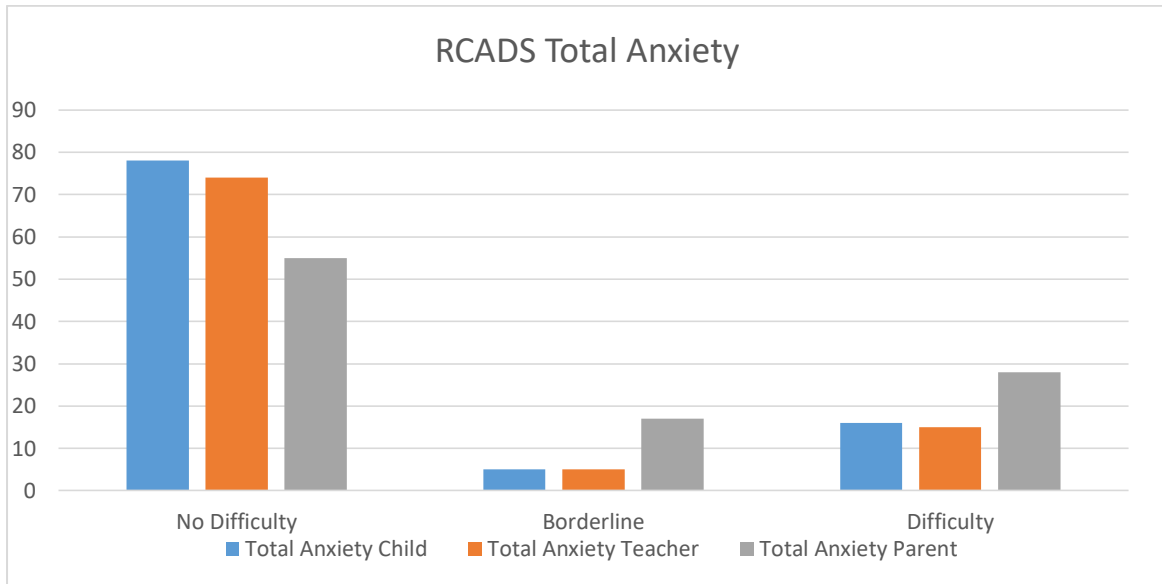
Table 12 compares the responses from all the participants – pupil, teacher and child, across all the sub areas of the RCADS including the total anxiety score.

Table 12: Table comparing child, teacher and parent scores by category and means/standard deviation

	Child							Teacher							Parent						
	No difficulty		Borderline		Difficulty		Mean/SD	No difficulty		Borderline		Difficulty		Mean/SD	No difficulty		Borderline		Difficulty		Mean/SD
	Freq	%	Freq	%	Freq	%	N=37	Freq	%	Freq	%	Freq	%	N=39	Freq	%	Freq	%	Freq	%	N=29
Social phobia	33	89.2	2	5.4	2	5.4	50.6 13.0	30	71.4	3	7.7	6	15.4	54.1 13.9	20	69.0	2	6.9	7	24.1	56.2 17.4
Panic disorder	24	64.7	5	13.5	8	21.6	58.6 12.3	28	71.8	2	5.1	9	23.1	58.4 15.1	21	50.0	2	4.8	6	14.3	59.2 18.5
Major depression	27	73.0	6	16.2	4	10.8	58.1 11.0	22	76.9	6	7.7	11	15.4	63.8 16.4	10	34.5	8	27.6	11	37.9	68.6 15.3
Separation anxiety	27	73.0	3	8.1	7	18.9	56.7 12.5	27	69.2	5	12.8	7	17.9	62.7 14.8	16	55.2	7	24.1	6	20.7	62.7 14.8
Generalised anxiety	30	81.0	5	13.5	2	5.4	50.1 11.6	36	92.3	0	0	3	7.7	51.6 10.9	20	69.0	1	3.4	8	27.6	58.0 12.2
Obsessive compulsive	27	73.0	6	16.2	4	10.8	54.7 13.3	33	84.6	2	5.1	4	10.3	54.3 11.7	24	82.8	1	3.4	4	13.8	54.9 13.7
Total anxiety	29	78.4	2	5.4	6	16.2	55.6 12.7	31	73.8	2	5.1	6	15.4	56.2 12.3	16	55.2	5	17.2	8	27.6	61.5 15.2

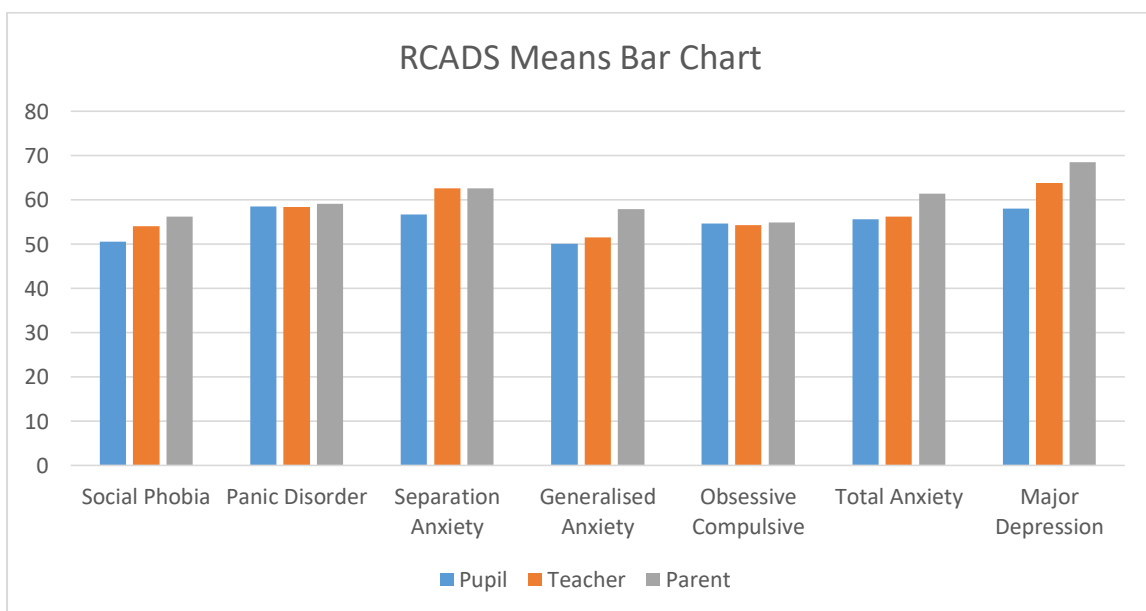
4.2.1.3: RCADS Mean Results

Figure 20: RCADS total anxiety* by participant



Total anxiety*=All subareas excluding major depression

Figure 21: Means bar chart showing RCADS by participant and subarea



Figures 20 and 21 are cross comparisons of the three participants RCADS sub scale. Figure 20 appears to show that within the level of total difficulty the parents may have reported a higher level than that of the teachers and children. The pupils appear to have also reported the highest level of no difficulty as can be seen in the subareas mentioned below and highlighted in figure 21.

Figure 21 highlights how major depression (which the only subarea to be excluded from the total anxiety score of figure 20) is also a relatively minor issue for children but not for parents. Figures 20 and 21 illustrate how the parental responses show the parents perceive there to be higher rates of difficulty than those of the teachers and pupils in all areas. The teachers in turn rate the pupils' difficulties higher than that of the pupils themselves as the pupils score themselves the lowest in all the different areas of difficulty with the exception of obsessive compulsive and panic disorder which are only marginally higher for teachers (0.4% and 0.2 % respectively). There may be many reasons for these results which are discussed in chapter 5. Figure 21 shows very clearly that a high proportion of parents are identifying difficulties for their children. Some of these parents are identifying borderline difficulties but the majority are not but are reporting major difficulties.

4.2.1.4: Comparing mean scores for RCADS by source using ANOVA/MANOVA

Comparisons of all the RCADS variables across the participant – child, teacher and parent scores were completed as multivariate analysis of variance to compare scores between parent, teacher and self-reports (appendix 35). Overall significance is just around the $p=0.05$ level (Pillai's Trace $F = 1.7$, $df = 14.194$, $p = 0.054$; Wilks' Lambda, $F = 1.7$, $df = 14,194$, $p = 0.51$). The parental RCADS mean scores were the highest.

When comparing individual scales across the three sources generalised anxiety ($F = 4.3$, $p = 0.02$ (rounded)) and major depression ($F = 4.4$, $p = 0.02$ (rounded)) were significantly different between groups. Within the generalised anxiety category parent scores were also significantly higher than for children ($t = 2.9$, $p = 0.02$ (rounded)). Similarly for major depression, parent scores were significantly higher than for children ($t = 3.6$ and $p = 0.01$). Separation anxiety also

scored higher parental and teacher results than pupil scores ($t = 3.6, p = 0.049$). (Appendix 35).

Multiple comparisons produced the following results:

1. Separation anxiety was significantly different between teachers and parents ($t = 3.5, p = 0.049$)
2. Generalised anxiety was significantly different between child and parent ($t = 3.5, p = 0.049$)
3. Major depression was significantly different between child and parent ($t = 3.6, p = 0.01$)

4.2.1.5: Correlations between sources - RCADS pupil, teacher and parent

To what extent do child and adult RCADS scale scores correlate?

Table 13: RCADS child, teacher and parent correlations (Correlation: 2-tailed sig < .05 marked by * and at $p < .01$ by **)

Pearson correlation coefficient P level/N size	Child-teacher	Child- parent	Teacher-parent
Social Phobia	-0.029 0.872 34	0.181 0.387 25	0.362 0.064 27
Panic Disorder	0.106 0.553 34	-0.095 0.653 25	0.257 0.196 27
Separation Anxiety	-0.083 0.641 34	-0.153 0.465 25	0.393* 0.042 27
Generalised Anxiety	0.052 0.771 34	-0.098 0.641 25	0.548** 0.003 27
Obsessive Compulsive	0.013 0.941 34	-0.044 0.833 25	0.017 0.932 27
Total Anxiety ¹	-0.285 0.102 34	-0.296 0.150 25	0.074 0.714 27
Major Depression	0.163 0.357 34	-0.29 0.889 25	0.431* 0.025 27

Total anxiety¹ = All subareas excluding major depression

Table 13 shows that there was only one moderate positive statistically significant correlations between any of the respondents – pupil, teacher and parent. This was between the adult groups - teacher and parent in the area of generalised anxiety. 3 of the 6 correlations scored less than 0.05 – in the sub areas of major depression (0.025), separation anxiety (0.042) and generalised anxiety (0.003) but only generalised anxiety was less than 0.01. This indicates that teachers and parents sometimes have views of the child which are comparable. None of the child ratings correlated on any scale with the teacher and parent scores. Teachers and parents have some tendency to agree with each other. Children appear to report things differently to adults.

The total anxiety scores also did not produce any significant correlations as also shown in table 13.

The strongest agreement is in the area of generalised anxiety (which is significant) followed by major depression and separation anxiety. Therefore the teachers and parents have a positive relationship throughout indicating a similar understanding of the experiences felt by the pupils in these areas.

There are no significant correlations between the pupils and their teachers or parents in any area.

Therefore:

Generalised anxiety teacher – parent is the only significant correlation.

Overall there were not any pupils who were seen as having a total anxiety score in the ‘difficulty’ range by all three respondents – pupil, teacher and parent. Similarly there were not any pupils who received a ‘borderline’ category from all three respondents either (appendix 17).

4.2.2.1: SDQ teacher and parent results

The data generated from the teacher and parents from the SDQ survey now follow. As described in chapter 3 the pupil questionnaire is not suitable for the age range of this study.

Teachers

Levels of specific kinds of emotional difficulties (fears, anxiety, depression etc) reported by teachers of the pupils.

The SDQ survey results generated firstly from the teacher and secondly parent responses now follows. Each of the five subsections (emotional symptoms, conduct problems, hyperactivity/inattention, peer relationship problems and prosocial behaviour) have been analysed in addition to the calculation of the overall total difficulties score (appendix 34).

When all these findings from the different areas of the teachers' responses to the SDQ are put together it is clear that there is a general consensus the teachers are not identifying the pupils as having any difficulties (table 14). Although 17 teachers report the pupil in questions having difficulties, the mean result of 14 falls at the extreme lower area of borderline. Indeed the scores in the 'mean' column all fall within either the 'borderline' or 'no difficulty' category. (See chapter 3 for the exact threshold levels for each area according to participant.)

From table 14 it is now possible to see that overall the highest level of teacher-reported difficulty was in the area of hyperactivity/inattention with conduct problems being the least reported (appendix 34). 18 parents reported 'difficulty' in this area (table 18) and 19 teachers did so (table 17). The SDQ is dissimilar to the RCADS in the area of banding the different subareas. As mentioned above and described chapter 3 the SDQ has different parameters for each level in each subarea, (Goodman, 1997). When considering these bands the mean results show that teachers generally do not feel that the pupils have any of these difficulties. All the means fall within the normal ranges except hyperactivity/inattention, total anxiety and prosocial behavior which are borderline difficulties. However it is worth noting that hyperactivity/inattention scored extremely high in these categories and were very nearly in the 'difficulty' range. Table 17 therefore highlights that teachers are noting hyperactivity/inattention and prosocial behaviours are the areas in which the pupils with ASD in their classes are struggling. In all areas the results are spread across the three categories of difficulty from which it is possible to infer that there is a spread of

difficulties and abilities in classrooms today. Some pupils are coping well while others are having more difficulties.

In addition to the five sub scales which can be generated from the SDQ, it was possible to also generate an overall total difficulties score. This overall total difficulties score takes into account the following four sub scales – emotional symptoms, conduct problems, hyperactivity/inattention and peer relationship problems. It excluded the score generated from prosocial behaviour. As shown in table 14 the mean for total difficulties was 14.0 which is at the extreme lower end of the ‘borderline’ category.

Parents

Levels of specific kinds of emotional difficulties (fears, anxiety, depression etc) reported by parents of the pupils.

Table 14 also shows the parental perceptions of their child’s difficulties. As indicated in the table hyperactivity/inattention were the most commonly reported as a difficulty with a mean of 7.3 and conduct problems the least with a mean of 3.5. For some of the parent responses the mean values fall within the clinical difficulty range. The mean results for hyperactivity/inattention, emotional problems and peer problems all fall within the difficulty area. These results are following the same pattern as discovered through the RCADS results. They both show that the parents are scoring their children’s difficulties as far higher than the teachers. It is interesting to note that although hyperactivity/inattention was in the difficulty area only for the parents it was the highest scoring area for the teachers as well although in their results it fell within the borderline category. Therefore both participants are perceiving this as the area in which most children are having difficulties.

As with the teacher SDQ responses the parents responses are also spread across the three categories of no difficulty, borderline and difficulty. Most children have fallen into either no difficulty or difficulty with generally the fewest number in borderline. This shows that parents believe there is a wide range of abilities to cope with some children coping well while others are struggling. This highlights how ASD can manifest itself in different areas and can vary widely within the ASD community of children.

This overall total difficulties score took into account the following four sub scales – emotional symptoms, conduct problems, hyperactivity/inattention and peer relationship problems. It excluded the score generated from prosocial behaviour. The mean value of 20.6 is within the difficulty range as the teachers' total difficulty score was as well. 21 parents believed that their children have a 'difficulty' compared with 17 teachers, which is a smaller number but still a large percentage at 43.6%. These results concur that the children in the study are perceived as having overall difficulties in these areas of functioning. When examining the difficulty column half of the children (50.0%) are perceived as having an overall difficulty which is once again slightly higher than the teachers' response of 45%. This high result shows that a large number of primary pupils with ASD are struggling to cope at school and are experiencing difficulties in different areas.

The columns in table 14 highlight the modal or most common score for the parents' responses. In agreement with the teachers responses for hyperactivity/inattention and total difficulty the modal value was a 'difficulty' score. However the results for emotional problems, conduct problems and peer problems also scored a 'difficulty' rating. Parents therefore perceive a wide range of difficulties are being experienced by their children.

4.2.2.2: Comparison across the SDQ perspectives

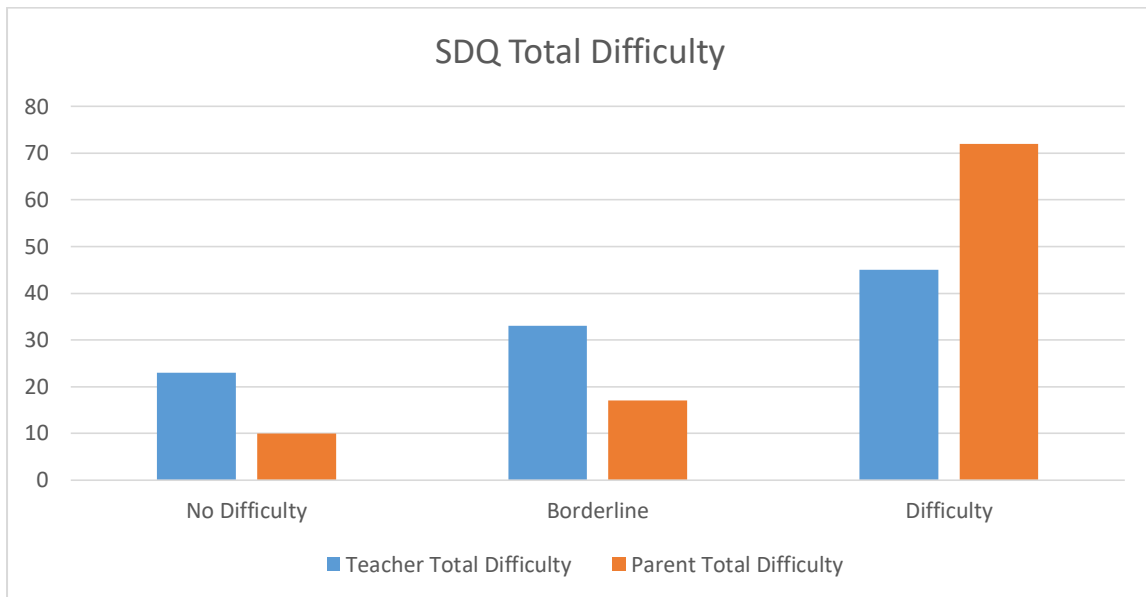
Table 14 below compares the SDQ results from teachers and parents. Overall throughout all the sub areas the teachers report a far lower rate of no difficulty highlighting that the parents perceive their children has having a bigger struggle to cope with school life. The mean values are also higher for parents with the exception of prosocial behaviour which is reversed (the lower the score – the higher the level of difficulty).

Table 14: Table comparing teacher and parent scores by category and means/standard deviation

	Teacher							Parent						
	No difficulty		Borderline		Difficulty		Mean/SD	No difficulty		Borderline		Difficulty		Mean/SD
	Freq	%	Freq	%	Freq	%	N=39	Freq	%	Freq	%	Freq	%	N=29
Emotional symptoms	22	56.4	4	10.3	13	33.3	4.5 2.7	6	20.7	3	10.3	20	69.0	5.4 2.5
Conduct problems	24	65.5	4	10.3	11	28.2	2.4 2.3	10	34.5	7	24.1	12	41.4	3.5 2.1
Hyperactivity/inattention	16	41.0	4	10.3	19	48.7	6.4 2.7	6	20.7	5	17.2	18	62.1	7.3 2.2
Peer relationship problems	25	64.1	5	12.8	9	23.1	3.0 2.2	6	20.7	8	27.6	15	51.7	4.3 2.3
Prosocial behaviour	18	46.2	3	7.7	17	43.6	5.0 3.1	15	51.7	3	10.3	11	37.9	5.3 2.4
Total difficulty	9	23.1	13	33.3	17	43.6	14.0 6.3	3	10.3	5	17.2	21	72.4	20.6 6.3

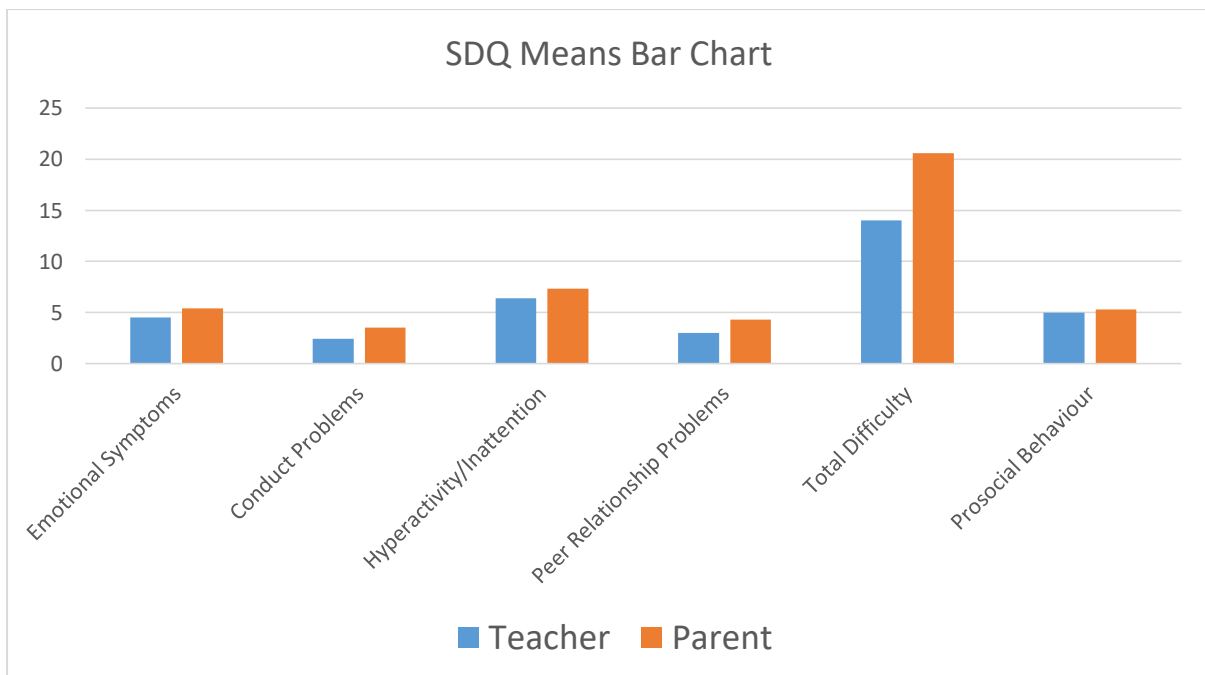
4.2.2.3: SDQ Mean Results

Figure 22: SDQ total difficulty* by participant



Total Difficulty* = All the subareas excluding prosocial behaviour

Figure 23: Means bar chart showing SDQ by participant and subarea



Figures 22 and 23 illustrate how parents believe their children experience far more problems than the teachers believe. Figure 23 shows that in all areas (emotional, conduct, hyperactivity, peer relationships, total difficulty and prosocial) the teachers scored the pupils lower than the parents. In all the other areas, the parents scored their children far higher than the teachers.

4.2.2.4: Comparing mean scores for SDQ by source using ANOVA/MANOVA

Comparisons of all the SDQ variables across the teacher-parent sources were also completed as multivariate analysis of variance (appendix 39). The overall difference was not found to be significant so therefore there were not significant differences overall between the teacher and parent ratings as shown in appendix 39 (Pillai's Trace $F=1.799$, $df=6,61$, $p=0.114$; Wilks' Lambda, $F=1.799$, $df=6,61$, $p=0.114$).

When comparing individual scales across the two sources conduct difficulties ($F=4.5$, $p=0.037$), peer problems ($F=7.3$, $p=0.009$) and total difficulties ($F=9.3$, $p=0.003$) were significantly different between groups.

Conduct difficulties ($F=4.5$, $p=0.037$)

Peer problems ($F=7.3$, $p=0.009$)

Total difficulties ($F=9.3$, $p=0.003$)

Within the total difficulty category parent scores were significantly higher than for teachers. Similarly for parents scored higher in the conduct difficulties and the peer problem categories (appendix 34).

Therefore overall part one findings highlight how the parents are reporting that the children are experiencing a far higher level of difficulties than the teachers and pupils themselves. The pupils are identifying far fewer difficulties than either the teacher or the parents. In the RCADS results all three respondents identified panic disorder, major depression and separation anxiety as the most common areas of difficulty to different degrees. This is consistent with the SDQ results found hyperactivity and emotional problems as the areas of greatest difficulty. The RCADS is providing greater depth in the area of emotional difficulties.

4.2.2.5: Correlations between sources - SDQ Teacher and Parent

To what extent do teacher and parent SDQ scale scores correlate?

Table 15: Overview of SDQ teacher and parent correlations (Correlation: 2-tailed sig <0.05 marked by * and at p<0.01 by **)

Pearson correlation coefficient P level/N size	Teacher-parent
Emotional symptoms	0.325 0.091 28
Conduct Problems	0.532** 0.004 28
Hyperactivity/ Inattention	0.364 0.057 28
Peer relationship problems	0.093 0.637 28
Total difficulty ¹	-0.011 0.958 27
Prosocial behaviour	0.065 0.741 28

Total Difficulty¹ =All sub areas excluding prosocial behaviour.

** . Correlation is significant

Using the data from table 15 we can see that between the respondents – teacher and parent, there is only one significant result. In the conduct problems subarea the correlation is significant at less than 0.01 level (0.004). The Pearson Correlation highlights a positive relationship between teacher and parent (0.532) which indicates that the responses from teachers and parents in the area of conduct problems are moving in the same direction and tend therefore to be in agreement with one another. None of the other subareas produced any significant correlations. The hyperactivity score is only just outside the 0.05 threshold cut off at 0.057 and is

therefore nearly significant. The result from the emotional scale at 0.091 (table 15) is not significant and shows a huge difference between the teacher (33.3%) and parent (69.0%) scores (table 14). This was also picked up in the RCADS results in table 17. The ratings in the conduct problems category are interesting as although they do correlate when examined in conjunction with table 14's scores there is a wide range of responses in each level of difficulty. Teacher rate 65.5% of pupils as not having a difficulty compared with only 34.5% of parents. Teachers rate 10.3% of pupils as 'borderline' whereas the parents rate 24.1%. Teachers rate 28.2% of pupils as having difficulty in this area contrasted with 41.4% of parents. Therefore the teachers and parents average out but they do not agree on individual children. It is worth noting that unlike with the RCADS results there were some pupils who received 'difficulty' or 'borderline' results from both respondents – teacher and parent (appendix 17). 9 pupils received 2 'difficulty' results and 2 pupils received 1 'borderline' results. As the SDQ is a broader questionnaire and the RCADS is more specific relating to different forms of anxiety and depression, it would appear that the respondents are in stronger agreement regarding that the pupils do have difficulties however there was less agreement about in what specific areas these difficulties lay.

4.2.3.1: Correlations between RCADS and SDQ results

Table 16: RCADS and SDQ correlations (Sig. correlations in blue)

SDQ → RCADS ↓	Teacher Emotional	Teacher Conduct	Teacher Hyperactive	Teacher Peer	Teacher Prosocial	Teacher Total	Parent Emotional	Parent Conduct	Parent Hyperactive	Parent Peer	Parent Prosocial	Parent Total
Child Social	-0.077 0.659 (35)	0.049 0.780 (35)	-0.269 0.118 (35)	-0.248 0.151 (35)	0.145 0.404 (35)	-0.204 0.241 (35)	-0.175 0.403 (25)	0.175 0.403 (25)	-0.194 0.352 (25)	0.107 0.620 (24)	0.646** 0.001 (24)	-0.055 0.794 (25)
Child Panic	-0.011 0.948 (35)	0.215 0.214 (35)	-0.034 0.848 (35)	-0.285 0.098 (35)	-0.048 0.785 (35)	-0.075 0.668 (35)	0.029 0.890 (25)	0.101 0.403 (25)	-0.118 0.574 (25)	0.046 0.831 (24)	0.323 0.124 (24)	0.012 0.954 (25)
Child Depression	-0.011 0.948 (35)	0.259 0.132 (35)	-0.038 0.828 (35)	0.011 0.948 (35)	-0.035 0.842 (35)	0.078 0.654 (35)	0.058 0.785 (25)	0.082 0.696 (25)	-0.160 0.445 (25)	0.557** 0.005 (24)	0.349 0.095 (24)	0.177 0.397 (25)
Child Separation	-0.086 0.621 (35)	0.224 0.196 (35)	-0.070 0.689 (35)	-0.164 0.346 (35)	-0.030 0.864 (35)	-0.036 0.836 (35)	0.135 0.521 (25)	0.121 0.566 (25)	-0.029 0.889 (25)	0.383 0.065 (24)	0.273 0.197 (24)	0.216 0.300 (25)
Child Generalised	-0.205 0.237 (35)	0.336* 0.049 (35)	0.009 0.961 (35)	-0.081 0.645 (35)	-0.232 0.179 (35)	0.016 0.925 (35)	0.128 0.543 (25)	0.132 0.530 (25)	-0.010 0.961 (25)	0.354 0.090 (24)	0.397 0.055 (24)	0.215 0.302 (25)
Child Obsessive	-0.056 0.748 (35)	0.381* 0.024 (35)	0.250 0.148 (35)	-0.070 0.688 (35)	-0.084 0.6431 (35)	0.192 0.270 (35)	0.002 0.995 (25)	0.385 0.058 (25)	0.386 0.057 (25)	0.254 0.230 (24)	0.384 0.064 (24)	0.357 0.080 (25)
Child Total	-0.080 0.648 (35)	0.240 0.166 (35)	-0.089 -0.611 (35)	-0.219 0.207 (35)	-0.007 0.969 (35)	-0.054 0.758 (35)	-0.031 0.882 (25)	0.191 0.362 (25)	-0.039 0.853 (25)	0.281 0.183 (24)	0.542** 0.006 (24)	0.117 0.576 (25)
Teacher Social	0.526** 0.001 (39)	-0.056 0.725 (39)	-0.237 0.152 (38)	-0.028 0.867 (39)	0.242 0.138 (39)	0.094 0.571 (39)	0.126 0.531 (27)	-0.153 0.445 (27)	-0.285 0.149 (27)	-0.302 0.134 (26)	0.174 0.396 (26)	-0.223 0.263 (27)
Teacher Panic	0.668** 0.000 (39)	0.001 0.993 (39)	-0.062 0.712 (38)	0.078 0.637 (39)	0.357* 0.026 (39)	0.288 0.76 (39)	0.510** 0.007 (27)	0.104 0.607 (27)	-0.164 0.415 (27)	0.026 0.901 (26)	-1.26 0.539 (26)	0.187 0.351 (27)
Teacher Depression	0.280 0.084 (39)	0.451** 0.004 (39)	0.295 0.712 (38)	0.031 0.853 (39)	0.164 0.317 (39)	0.425** 0.007 (39)	0.197 0.326 (27)	0.171 0.393 (27)	0.492** 0.009 (27)	0.504** 0.009 (26)	-0.119 0.563 (26)	0.508** 0.007 (27)
Teacher Separation	0.444** 0.005 (39)	-0.149 0.365 (39)	-0.148 0.376 (38)	-0.152 0.356 (39)	0.284 0.080 (39)	0.017 0.917 (39)	0.211 0.290 (27)	-0.557** 0.003 (27)	-0.574** 0.002 (27)	-0.138 0.503 (26)	-0.185 0.366 (26)	-0.368 0.059 (27)
Teacher Generalised	0.680** 0.000 (39)	0.085 0.607 (39)	-0.229 0.167 (38)	0.186 0.258 (39)	0.096 0.561 (39)	0.295 0.068 (39)	0.196 0.328 (27)	-0.152 0.449 (27)	-0.150 0.456 (27)	0.172 0.402 (26)	-0.078 0.705 (26)	0.037 0.856 (27)
Teacher Obsessive	0.523** 0.001 (39)	0.186 0.256 (39)	0.050 0.767 (38)	0.294 0.069 (39)	0.080 0.627 (39)	0.418** 0.008 (39)	0.024 0.905 (27)	-0.255 0.200 (27)	-0.078 0.700 (27)	0.072 0.725 (26)	-0.191 0.349 (26)	-0.080 0.692 (27)
Teacher Total	0.747** 0.000 (39)	0.028 0.868 (30)	-0.163 0.329 (38)	0.074 0.656 (39)	0.282 0.082 (39)	0.290 0.073 (39)	0.268 0.177 (27)	-0.213 0.286 (27)	-0.354 0.070 (27)	-0.032 0.876 (26)	-0.126 0.538 (26)	-0.108 0.591 (27)
Parent Social	0.577** 0.001 (28)	-0.023 0.909 (28)	-0.286 0.148 (27)	0.211 0.280 (28)	0.162 0.409 (28)	0.191 0.330 (28)	0.496** 0.006 (29)	0.075 0.701 (29)	-0.111 0.566 (29)	0.046 0.817 (28)	0.105 0.595 (28)	0.200 0.299 (29)
Parent Panic	0.428* 0.023 (28)	-0.014 0.942 (28)	-0.183 0.361 (27)	0.048 0.807 (28)	-0.028 0.886 (28)	0.116 0.557 (28)	0.550** 0.002 (29)	-0.010 0.959 (29)	0.058 0.766 (29)	-0.082 0.678 (28)	-0.282 0.145 (28)	0.206 0.284 (29)
Parent Depression	0.391* 0.040 (28)	0.191 0.331 (28)	0.214 0.284 (27)	0.254 0.193 (28)	0.043 0.827 (28)	0.404* 0.033 (28)	0.666** 0.000 (29)	0.423* 0.022 (29)	0.313 0.098 (29)	0.192 0.327 (28)	-0.077 0.696 (29)	0.591** 0.001 (29)
Parent Separation	0.394* 0.038 (28)	0.119 0.546 (28)	0.196 0.328 (27)	0.330 0.087 (28)	0.017 0.933 (28)	0.400* 0.035 (28)	0.464* 0.011 (29)	0.073 0.708 (29)	0.055 0.778 (29)	0.245 0.208 (28)	-0.296 0.126 (28)	0.321 0.089 (29)
Parent Generalised	0.633** 0.000 (28)	0.104 0.598 (28)	-0.128 0.526 (27)	0.536** 0.003 (28)	-0.079 0.690 (28)	0.438* 0.020 (28)	0.536** 0.003 (29)	0.142 0.463 (29)	0.024 0.900 (29)	0.116 0.556 (28)	-0.322 0.095 (28)	0.314 0.097 (29)
Parent Obsessive	0.305 0.114 (28)	0.364 0.057 (28)	0.069 0.731 (27)	0.341 0.076 (28)	-0.328 0.089 (28)	0.412 0.029 (28)	0.373* 0.046 (29)	0.222 0.247 (29)	-0.195 0.310 (29)	0.114 0.565 (28)	-0.186 0.344 (28)	0.336 0.075 (29)
Parent Total	0.615** 0.000 (28)	0.046 0.817 (28)	-0.146 0.468 (27)	0.341 0.076 (28)	0.011 0.956 (28)	0.334 0.083 (28)	0.589** 0.001 (29)	0.117 0.547 (29)	0.041 0.835 (29)	0.063 0.751 (28)	-0.191 0.329 (28)	0.312 0.099 (29)

Table 17: Summary of RCADS and SDQ correlations

First is RCADS and second SDQ	SDQ Teacher	SDQ Parent
RCADS Pupil	2/42 significant + Teacher Conduct – Child Generalised Anxiety & Obsessive Compulsive	3/42 significant + Parent: Prosocial – Child Social Anxiety & Anxiety Total + Parent: Peer Problems – Child: Depression
RCADS Teacher	10/42 significant + Teacher: Emotional – Teacher: all Anxiety + Teacher; Conduct – Teacher: Depression + Teacher; Prosocial – Teacher: Panic	5/42 significant + Parent: Emotional – Teacher: Panic - Parent ;Conduct – Teacher; Separation Anxiety (neg as expected) + Parent: Hyper & Peer Problems & Parent: Total Difficulties. – Teacher; Depression
RCADS Parent	10/42 significant + Teacher; Emotional – Parent; all except Obsessive Compulsive + Teacher; Total Difficulty – Parent; Depression, Separation and Generalised +Teacher Peer – Parent Generalised	7/ 42 significant + Parent; Emotional – Parent: all

Table 17 summarises the correlations between the RCADS results and the SDQ results for all participants – child, teacher and parent. One of the strongest set of correlation results exist between the teacher SDQ and teacher RCADS (10/42). As these results come from the same source ie the same participants so this is to be expected. The weakest results are between the child RCADS results and the teacher and parent SDQ results (2/42 and 3/42).

Part Two Results

4.3.1: Introduction

In this section the results from part two of the study will be presented. As described in chapter three, the methodology chapter, the second part of the study set out to involve all of the original teachers from part one (28). Two withdrew at this point leaving a total of 26 participants. The researcher visited each teacher in their school where the interviews took place. Each teacher was interviewed to answer the following research questions:

To examine how teachers make sense and address the social, emotional and behavioural needs of primary Children with ASD in class settings.

- a) What understanding, background knowledge and training do teachers have about supporting the emotional and behavioural needs of primary pupils with ASD? (4.3.2)
- b) How are primary teachers responding to the emotional and behavioural difficulties experienced by primary pupils with ASD in the ordinary classroom? (4.3.3)
- c) To what extent do teachers review, develop and abandon strategies for assisting children with ASD needs? (4.3.4)
- d) How and to what extent have teachers been supported in responding to emotional and behavioural needs of primary pupils with ASD and how can this support be developed for teachers and pupils? (4.3.5)

4.3.2: Teachers' understanding, background knowledge and training

The researcher visited each teacher (28) for the purposes of interview and recorded their responses to the questions listed on the questionnaire (appendix 18). Two teachers opted not to take part in this aspect of the study, leaving 26

participants. The typed notes of one of these teachers' questionnaires is shown as an example as appendix 19. These findings were then inputted into NVivo.

The data from appendix 19 has been accumulated together in table 17 to create an overview of the teachers' understanding, background knowledge and training. The two teachers who chose not to take part in this second section of the study (teacher 15 and teacher 23) have not been included in table 17 as no responses were available.

(N.B. - In the tables which follow the total number of responses is included as (n=?). The number varies sometimes as some teachers are discussing ideas for more than one pupil whereas others did not discuss certain topics.)

Table 18: Overall results of teachers' understanding, knowledge and training

Previous experience teaching Children with ASD?	Qualification	Trained in UK	Length of service (in years)	SEN training during teacher training	Additional ASD training since qualified	Uses any kind of strategies?	ASD and non ASD strategies the same?	Collection of data to inform changes in practice?
Yes = 96.2% (25) No = 3.8% (1)	BEd = 30.8% (8) PGCE = 65.4% (17) GTP = 3.8% (1)	Yes = 80.8% (21) No = 19.2% (5)	0-5y = 50% (13) 6-10y = 19.2% (5) 11-15y = 11.5% (3) 16-20y = 11.5% (3) 21+y = 7.7% (2) Mean = 8.6y Median = 5.5y Mode = 2y	None = 26.9% (7) Yes with SEN = 53.8% (14) Yes with ASD = 19.2% (5)	Yes = 42.3% (11) No = 57.7% (15)	Yes = 100% (26) No = 0% (0)	Yes = 34.6% (9) No = 65.4% (17)	Yes = 0% (0) No = 100% (26)

Teacher Training Programmes

Table 18 presents the overall findings of the teachers' understanding, background knowledge and training. Nearly two-thirds (65.4%) of teachers reported that they completed a post graduate qualification to allow them to teach. A PGCE follows an undergraduate course of three years. Only one participant, 3.8%, completed a Graduate Training Programme which allows teachers to train in schools while employed as an unqualified teacher. The remainder (30.8% - 8/26) reported that they completed a Bachelor's in Education (BEd). From the teachers surveyed therefore it appears that most teachers gain their teacher training and guidance from university settings.

From the results in table 18 it is possible to compare different areas of interest with teaching experience. In this way it is possible to explore whether there are any connections between different categories. Although this was not a main focus point, the availability of the data allows for this to be examined and provides an additional understanding of the experiences of the teachers.

SEN training by training location

Table 19 and table 20 below illustrate how the teachers reported that those who trained in the UK had a higher rate of SEN training than those who qualified outside the UK. However as only three teachers were trained abroad the difference is difficult to interpret. For the three teachers trained abroad, the amount of ASD specific training within that group was higher less than for those who qualified in the U.K.

Table 20 breaks down these results into more specific groups based upon length of teaching service. Table 25 highlights that those teachers who qualified more recently self-reported that they received both more SEN and ASD training prior to taking their first appointment than their more experienced colleagues. These results seem to imply that the level of SEN training in universities has increased in more recent years. This is also true regarding the training schools are offering their staff (table 2).

Table 19: SEN training by training location

Location of training	Received SEN training	Received SEN training including an ASD focus
UK	76% (16)	14% (3)
Outside UK	60% (3)	40% (2)

Table 20: SEN training by length of service

Length of service	Received SEN training	Received SEN training including an ASD focus
0-5 years	58% (11/19)	11% (2/19)
6–10 years	26% (5/19)	5% (1/19)
11–15 years	11% (2/19)	5% (1/19)
16-20 years	5% (1/19)	0% (0)
21+ years	0% (0)	0% (0)

Table 21: Additional training since qualified by length of service

Length of service	Received additional SEN training since qualified
0-5 years	45% (5/11)
6–10 years	18% (2/11)
11–15 years	9% (1/11)
16-20 years	9% (1/11)
21+ years	18% (2/11)

Table 21 shows that currently newly qualified teachers are invested with additional training from the start of their career. However there is the possibility that as more experienced teachers qualified longer ago they may have forgotten some of their training when asked.

Concerns regarding teaching pupils with ASD

This study has found that teachers do have concerns about teaching pupils with ASD. Table 22 below illustrates these responses. 84% of the teachers who

were explicitly asked this question admitted having concerns regarding teaching a pupil with ASD this year.

Table 22: Percentage of teachers with concerns regarding teaching pupils with ASD (19)

Response	Percentage
Yes – had concerns	84% (16)
No – did not have concerns	16% (3)

The high percentage of teachers who did have concerns about teaching a pupil with ASD perhaps is perhaps a reflection of the lack of training in this area shown in table 16. As only 19.2% received any ASD training at university it is perhaps unsurprising that this results in a high number of concerns. Table 23 below lists the type of concerns the teachers have.

Table 23: Types of concerns regarding teaching ASD pupils by frequency of teacher mentions (16 teacher spoke on this subject).

Type of concern	Frequency	
Managing pupil's communication difficulties	81%	13
ASD pupils are all so different – knowing how to approach	63%	10
Setting the correct academic challenge	56%	9
Managing behaviour	44%	7
Managing social difficulties	31%	5
Managing depression	19%	3
Managing change in the school day	13%	2
Managing independent working	13%	2
Managing pupil's areas of special ability	6%	1
Developing own approaches	6%	1
Knowing which language to use	6%	1
Managing low academic ability	6%	1
Managing medical problems	6%	1
Maintaining safety	6%	1
Managing testing	6%	1

As shown in table 23 the most frequent concern was managing a pupil's communication difficulties among those teachers who expressed a concern. There

is a real concern, as a large majority of these respondents 13/16 (81%), worried that they would not be able to make themselves understood to the pupil or would not be able to understand the pupil – *“This child often misunderstands a situation or the real meaning when someone is speaking.”* Therefore there were concerns about being consistent in the way in which language is spoken to enable this pupil to access the teacher’s instructions correctly (teacher 9). As reflected in the limited amount of training in SEN during teacher training (only 5/26 - 19.2% - table 18) there was a major concern regarding how to approach pupils with ASD (63%). These teachers felt that they were unsure of what the traits of ASD were and therefore how to approach them 10/16 (63%) *“all children with ASD are different and that it is therefore difficult to know how to help children”* (teacher 12). Nearly half of these teachers 7/16 (44%) were concerned about managing the behavior of the pupil with ASD – *“This child has behavioural difficulties and often has temper issues at home and at school”* (teacher 17). Changes in the school day 2/16 (13%) is often an area mentioned in literature as an area of difficulty for pupils with ASD and was referenced by 2 teachers in this study *“he finds changes to routines difficult to manage”* (teacher 6).

Causes of difficulties

There were a range of responses concerning the teachers’ perceptions of the cause of the pupil’s difficulties in accessing the curriculum and generally achieving well in all aspects of school life including socially. Anxiety was the most frequently used response. Table 24 shows these ideas.

Table 24: Teachers' perception of origin of pupils' difficulties (39)

Origin of difficulty	Frequency	
Anxiety	33%	13
Problems at home	18%	7
Does not like themselves/dislikes being autistic	5%	2
Limited attention span	5%	2
Cannot trust anyone	3%	1
Language difficulties	3%	1
Personality	3%	1
Teacher had no opinion	31%	12

The highest percentage, 33% (13/39), highlights that the largest group of teachers believe that anxiety is in evidence at school and is causing the difficulties the pupil is experiencing – *“anxiety is the underlying problem for the child”* (teacher 13), *“anxiety is the underlying cause of these difficulties”* (teacher 12), *“anxiety issues”* (teacher 10) and *“anxiety is causing these behavioural difficulties”* (teacher 17). The difficulties are *“caused by a nervous anxiety”* (teacher 18) and the *“problems this child faces is due to being faced with unfamiliar people and this anxiety is the underlying problem for the child”* (teacher 13). Nearly one fifth of teachers mentioned problems at home as another cause *“this child has issues at home and it is difficult to engage with his mother to discuss these”* (teacher 6). It is worth noting that language difficulties featured very low on the list with only one teacher mentioning them. This is in contrast to the high result of teacher concerns about teaching a pupil with ASD with communication difficulties at 81% in table 23. Although teachers had this concern it appears that actually in the classroom this concern is not believed to be a major underlying cause of difficulty.

4.3.3: How primary teachers respond to the social, emotional and behavioural difficulties of pupils with ASD

Strategies employed in the classroom

As indicated in table 18 all teachers with any length of teaching experience use strategies in class to assist the pupils with ASD to access their learning (100%).

Using NVivo the strategies and the frequencies in which they were mentioned have been examined in table 25. Table 30 shows a wide variety of strategies which are currently being employed in observed classrooms for the benefit of pupils with ASD.

As shown in table 25 visual supports were the most used with 82% of the teachers surveyed expressing their usage in the classroom. These visual supports were mostly visual time-tables in different forms but also included pictures of different places in the school and expectation reminder cards. Some of the visual time-tables contained pictures, others all writing, some had stickers, others were based around a favourite topic of the child. However they were all constructed to be used to show the structure of the pupil's school day - *"visual timetable"* (teacher 19), *"pictures of his school are also displayed for him to aid his understanding of where he is going"* (teacher 17) and *"as the pupil finds remembering the order in which things should occur difficult the teacher has visual cards as reminders"* (teacher 27).

The third most popular, sensory aids, may also require more explanation. Sensory aids were anything which the pupil could feel during quiet times in school such as in assembly or when the teacher is speaking to the class. These sensory aids included wobble cushions to sit upon, toys which could be manipulated in the pupils' hands, weights for the shoulders and ear muffs – *"a wobble cushion to sit on"* (teacher 22), *"Play Doh"* (teacher 19), *"the pupil looked the cubes and tried to sort or arrange them...as they are kinaesthetic and physical ways to learn"* (teacher 25), *"ear defenders and sensory toys in another room"* (teacher 11) and *"stress toys...sensory aids"* (teacher 1 and teacher 8). Small group work was also popular *"this small group work allows the pupil to speak in a more contained situation and encourages him to join in class discussions which he does not generally do in a whole class situation"* (teacher 4), *"the pupil takes part in small group work to work on taking turns"* (teacher 1), *"the pupil benefits from small group work to build his confidence"* (teacher 7) and *"small group work to develop his confidence"* (teacher 3). The isolation unit *"best approach for this child is to withdraw him from the class so he can work in a quiet area uninterrupted by his peers"* (teacher 1) and *"relocates the pupil to be alone if the required work is not being undertaken and this generally helps to refocus him"* (teacher 26). The use of praise featured quite highly at 28% *"gives praise to encourage expected behaviours"* (teacher 31) and *"positive reinforcement works well for this pupil"* (teacher 5).

Strategies using interventions designed exclusively for pupils with ASD or require further training such as TEACCH feature very far down the list in table 29 with only 6/39(15%) using it – “*the teacher has been trained in the TEACCH programme*” (teacher 11) and “*follows the TEACCH programme*” (teacher 9). Similarly the ‘Attention Autism’ programme which exists to address the needs of pupils with ASD in the classroom only accounted for 2/39 (5%) - “*Attention Autism is also used... developed by Gina Davis which focuses on the practical steps of running interventions supporting attention, social and communication skills*” (teacher 11). Makaton, ELSA, TEACCH and ‘Attention Autism’ all feature low on table 9 and are therefore used infrequently. When considering these results alongside those in table 22, although 42.3% of teachers reported receiving training on ASD this training may not have been formal training which would have permitted a formal strategy such as those listed above to be followed. Indeed many teachers spoke of the training as staff meeting sessions where the SENCO would suggest general ideas “*in school training*” (teacher 10) and “*some staff meetings have been particularly useful*” (teacher 28). Although these sessions can be useful it does allow this situation to arise where pupils with ASD are not able to access successful established strategies which support pupils with ASD in the classroom. This is also highlighted in table 18 which shows in the second to last column how over a third (34.6%) use the same general strategies with other non-ASD pupils. Therefore the provision for pupils with ASD appears not to be specifically targeted for this need.

Table 25: Strategies employed by teachers (n=39 pupils)

Strategy	Frequency		Strategy	Frequency	
Visual supports	82%	32	Non verbal communication	8%	3
LSA/1:1	51%	20	Repeat instructions	8%	3
Sensory aids	41%	16	Time countdown	8%	3
Small group work	38%	15	'Attention Autism' programme	5%	2
Short instructions	31%	12	Discussion on topics of interest	5%	2
Isolation unit	28%	11	Does not challenge behaviour	5%	2
Praise	28%	11	'ELSA' programme	5%	2
Movement breaks	21%	8	Longer time given for tasks	5%	2
iPad	21%	8	Makaton	5%	2
Parental support	21%	8	Pre/post teaching	5%	2
Social stories	18%	7	Writing supports	5%	2
Laptop	18%	7	Calmer tone of voice	3%	1
Different work to peers	15%	6	High expectations	3%	1
External agencies	15%	6	Dyslexia support	3%	1
Gain attention of pupil	15%	6	'Forest School'	3%	1
Routines	15%	6	Handwriting support	3%	1
'Clicker'	15%	6	Organisational support	3%	1
'TEACCH' programme	15%	6	PE sessions	3%	1
ICT room games	15%	6	Touch typing practice	3%	1
Behaviour reminders	10%	4	'Relax Kids' programme	3%	1
Interactive whiteboard games	10%	4	Rewards and sanctions	3%	1
			Self-esteem development	3%	1

Strategies for ASD and children without ASD

As mentioned above table 17 shows how 34.6% of teachers use the same strategies with pupils with SEN whereas 65.4% do not. Over 1 in 3 teachers use the same strategies with non-SEN pupils as with SEN pupils highlighting the non-personalised provision which appears to be taking place which will be discussed in chapter 5

Strategies used to support anxiety

Table 24 shows the main cause of any difficulties the pupil in their class may be experiencing is anxiety (33%). When asked if there are any strategies which are used with pupils with ASD to support anxiety the following results (table 31) were found.

Table 26: Use of strategies to support anxiety (n=39)

Support for managing anxiety	Frequency	
No	15%	6
Yes	85%	33
Yes (33)		
Withdraw from class	27%	9
Calm voice	24%	8
Sensory aids	18%	6
Mindfulness activities	15%	5
Teacher repeat instructions	12%	4
Work with 1:1	9%	3
SALT activities	9%	3
Complete a social story	6%	2
Breathing activities	6%	2
Distract pupil's attention	6%	2
Group work	6%	2
Computer games	6%	2
Praise/reassurance	6%	2
Listen to music	3%	1
Examine visual timetable	3%	1
Teacher calls pupil's name	3%	1
Break from work	3%	1
Pupils encouraged to write problem down	3%	1
Teacher leaves pupil alone	3%	1
Colouring in	3%	1
Move body	3%	1
Pupil moved to work with another pupil 1:1	3%	1
Pupil look at 5-point scale of acceptable behaviour	3%	1
Complete home-contact book	3%	1

Table 24 shows that although 33% of teachers feel that anxiety is an underlying source of the pupil's difficulties 85% actively use some sort of strategy to attempt to alleviate anxiety. This is a major increase highlighting that although some teachers may not feel anxiety is a main source of the difficulties a pupil may be experiencing, it is something which they believe is present. Anxiety is being managed by removing the pupil from their classroom (27%) - *remove the child from the class* and use *"the isolation unit to calm the child"* (teacher 8) and *"remove the child from the class and the company of other children...pupil then goes to another quiet space in the school"* (teacher 8). This strategy would indeed remove the pupil from the situation and would also remove any distraction the pupil with ASD may be causing his/her peers. The use of a 1:1 (9%) - when the pupil with ASD to work

solely with his/her 1:1 is a similar response at it removes the pupil with ASD from the situation and allows the rest of the class to continue with their work - *“the teacher instructs the 1:1 to remove the pupil from the company of his peers to have some time out”* (teacher 1).

4.3.4: How primary teachers review, develop and abandon strategies

How decisions are made regarding the use of strategies

As described in chapter two the Department of Education guidance (2014) explains that class teachers are responsible for the pupils in their care although every school must have a SENCO teacher in place who will support class teachers with their provision for pupils with SEN. Table 27 shows the people who make the decisions regarding which strategies are used with the pupils with ASD.

Table 27: Key makers in decisions regarding provision (n=26)

Decision maker	Frequency	
Class teacher	100%	26
SENCO	73%	19
Head teacher/Senior teacher	35%	9
1:1	27%	7
Previous class teacher	23%	6
Parents	23%	6
ASD specialist	8%	2
Educational Psychologist	8%	2
SALT	4%	1

Class teachers state that there are other key decision makers involved regarding which strategies should be employed with pupils with ASD.

In addition to the class teacher making decisions regarding the use of strategies the SENCO's ideas also feature frequently. 73% of teachers surveyed confirmed that their school's SENCO helped them to decide which strategies they should use. It is interesting to note that the three lowest frequency of input came from people from outside the daily school environment – ASD specialists, Educational Psychologists and SALT. Although these three groups of people would

know the pupil the least out of all the stakeholders involved, they are the most likely to be specialised in the areas of difficulty the pupils are experiencing and their limited input does not allow their knowledge to be included. Their actual input with teachers is also limited as all Educational Psychologist reports are sent to the SENCO not class teachers for him/her to disseminate.

Reasons why strategies do not work and are abandoned

Table 28: Reasons why strategies do not work with pupils with ASD (n=17)

Reason		Frequency	
Pupil did not like it		47%	8
	Pupil chose to abandon	6%	1
No effect on pupil/not needed		47%	8
	Not the right level/unsuitable for pupil	12%	2
Staff capable of using strategy left		18%	3
Pupil ignored strategy		18%	3
Teacher forgot to use		12%	2
Strategy caused more anxiety		12%	2
Pupil did not understand		6%	1
Took up too much time		6%	1

Table 28 lists the reasons teachers (who confirmed they had stopped using a strategy/strategies) mentioned regarding the reasons why the strategies employed were stopped. The two main reasons were that the pupils did not like the strategy 8/17 (47%) *“the child with ASD particularly did not like”* (teacher 14), *“pupil did not like it”* (teacher 6 and teacher 18) are examples of this and that the strategies had little effect on the pupil 8/17 (47%) *“they did not have any effect on the pupil”* (teacher 7) and *“the pupil did not respond”* (teacher 8). From the findings above regarding the limited use of specific programmes designed for especially for pupils with ASD this is perhaps a predictable result. Pupils not actually liking the strategy

was therefore a main reason for abandonment 8/17 (47%) alongside the reason of no effect on the pupil 8/17 (47%). The reason of the pupil not liking the strategy 8/17 (47%) alongside the pupil choosing to abandon 1/17 (6%) “*she made the decision to stop using it herself*” (teacher 22) shows that some teachers are including the student voice in their decisions whether this is verbally from the pupil or an observable occurrence. The member of staff being capable of employing the strategy leaving the school is featured rather highly in table 11 at 18% -3/17. Some teachers “*kept forgetting to use them*” (teacher 7) scored 12% which may be a reflection of the workload of a teacher which will be discussed in the next chapter.

Review of strategies - Are the strategies employed useful?

Most teachers feel the strategies which are employed do have a positive effect on the pupils with ASD in their classes 32/39 (82%). Only 8% (3/39) believe the strategies employed are not assisting the pupil in any way whereas 4/ 39 (10%) fall between the two and believe there may be some benefits to using these strategies. However these strategies do not always have the desired effect “*sometimes successful*” (teacher 27) and “*some success however she still has concerns*” (teacher 13). The high frequency of teacher satisfaction with the use of the strategies also shows that there are nearly a fifth of pupils for whom their teachers feel that they do not receive sufficient ways in which to address their difficulties. The support in place could therefore be improved for one in every five pupils with ASD in this sample.

How strategies are generally reviewed and developed

The last column in table 18 highlights the universal lack of revision and development of strategies for pupils with ASD. No teachers collect or record any type of data concerning the use of strategies with pupils and therefore no information is passed up throughout the pupil’s school career. There does not appear to be any monitoring or revision of strategies and therefore now opportunity to adapt and improve by building on past successes or eliminating ineffective practices.

4.3.5: How primary teachers are supported and how this can be developed

Support teachers have received

Table 29: Range of support offered to class teachers (n=26)

Type of support	Frequency	
SENCO	81%	21
Previous teacher	42%	11
External specialist	42%	11
Parents	27%	7
Observing other teachers	23%	6
Visiting other settings	23%	6
INSET	23%	6
1:1 (Individual adult support)	15%	4
SALT	12%	3
Training courses	8%	2
Reading literature	8%	2
Educational Psychologist	4%	1
Masters degree	4%	1
LA meetings	4%	1

Table 29 clarifies that the main source of support given to class teachers in managing the needs of the pupil with ASD in their classes is the SENCO 21/26 (81%). Nearly half of the teachers surveyed, 11/26 (42%), listed both working with the last class teacher and the input of specialist external agencies as sources of support. Therefore it is other school staff members – the SENCO and the previous class teacher – who are responsible for providing the most support to class teachers in this study.

How this support for teachers can be developed further

Table 30: Teacher ideas for further support (n=19)

Type of support	Frequency	
Course solely on ASD	26%	5
Working with specialists on ASD at school	21%	4
General CPD on ASD	21%	4
Visiting other settings	16%	3
Observing teachers	11%	2
Availability of new resources to try	5%	1
Course on managing emotions	5%	1
Training of 1:1 (Individual adult support)	5%	1
New updates in subject communicated	5%	1

Table 30 explores the ideas of different types of support teachers felt would help them to better assist pupils with ASD in their classrooms. The most popular was to attend a course solely on ASD, 5/19 (26%), *“a course on autism”* (teacher 19 and teacher 12), *“training on working with children who have ASD and a stutter”* (teacher 11) and *“CPD focusing on autism would be very useful”* (teacher 17). If this score is combined with the ‘general CPD on ASD’ response (which implied that the teachers sought CPD on ASD but was unsure or had no preference concerning how this CPD should take place whether 1:1 or in a course setting for example) the percentage rises to 47% (9/19) - *“see other approaches when working with children with ASD modelled”* (teacher 28) and *“like to go with the 1:1 to an autistic unit to observe”* (teacher 27). The 1:1 is individual adult support. There was a strong feeling amongst the teachers that specialist support was preferable to any other type of support. Although it is clear from table 14 that support from the SENCO was overwhelmingly the most frequent form of support received (80%), none of the teachers requested more support from this source or indeed any which could be supplied by their school. There is a need for teachers to work with specialist ASD staff within their own schools (4/19 - 21%) in order to develop strategies which are specific to the pupil in their class and achievable within their own school environment *“more frequent visits by specialists”* (teacher 27). If specialist support is what is sought it is concerning that this is not taking place as the main source of help (table 29).

How support for pupils could be developed

Table 31 lists the teacher responses concerning how support could be developed for pupils with ASD. The most frequently cited development the teachers would like to see is more small group work (35%) “*small group work with a structured tasks with other children*” (teacher 20) and “*social skills group work with children without ASD*” (teacher 22). Due to the some of the common characteristics of ASD, such as disliking noise, small group work would be a better option for pupils with ASD as they “*enjoy small group work*” (teachers 9 and 10), “*This small group work allows the pupil to speak in a more contained situation and encourages him to join in class discussions which he does not generally do in a whole class situation... It also provides the opportunity to take turns and listen to others*” (teacher 4) and “*small group work as a turn taking exercise and a way in which to increase self-esteem*” (teacher 8).

Table 32 explores who the teachers feel would be best to support these developments. Most teachers favour the schools’ other non-teacher staff who have been trained by a specialist (58%) – “*school staff who have been trained could run these sessions, following on from specialist staff*” (teacher 22), “*these sessions would be better led by an external specialist with training in this area and could then be followed up by trained staff*” (teacher 24), “*school staff could run these sessions after they have been trained by a SALT specialist*” (teacher 18) and “*teaching assistants would need more training in this area*” (teacher 12). Only 21% of teachers felt that the current school non-teacher staff including teaching assistants were suitably trained to take on this role straightaway which highlights a lack of confidence the teachers have in other staff’s abilities. If the external specialist involvement, on their own and in the training of teaching assistants, is calculated it amounts to 90%. Therefore nine out of ten teachers feel more input from specialist staff of ASD would benefit the pupil. This is in agreement with table 32 where teachers sought more specialist training for themselves. Therefore there is a belief that more specialist support is required for pupils and teachers in order to more fully support pupils with ASD in classrooms.

Table 31: How support for pupils could be developed (n=26)

Type of development required	Frequency	
Small group work	35%	9
Social and communication skills	31%	8
More time with 1:1	31%	8
Emotional support	27%	7
Time to work with non-ASD pupils	19%	5
Links to future life	19%	5
Music therapy	12%	3
Focus and concentration	12%	3
Literacy support	8%	2
Limit use of 1:1/More independence	8%	2
Less work/more time for activities	8%	2
More Speech and Language Therapy	8%	2
Academic support	8%	2
More funding generally	8%	2
Opportunities to work alone	4%	1
More breaks	4%	1
Drama activities	4%	1
Home support	4%	1
Building confidence	4%	1

Table 32: Teachers' opinions concerning who could support these strategies (n=19)

Current teaching assistants	Teachers	Teaching assistants after training by specialist	External specialist
21% (4)	0% (0)	58% (11)	32% (5)

The findings from the interviews in part two highlight how there is currently a lack of training provided for teachers regarding ASD provision. Perhaps as a result of this the majority of teachers have concerns about teaching a pupil with ASD. When considering the support available in schools to pupils with ASD the use of visual aids and teaching assistants feature very highly. There is an obvious lack of the presence of specific ASD programmes in schools, such as TEACCH and 'Attention Autism' perhaps due to the lack of training given to teachers. Most teachers are concerned with managing a pupil with ASD's communication needs. Although only a third of teacher believe that anxiety is the main underlying reason for

the difficulties the pupils may be experiencing, 85% of teachers actively attempt to support the anxiety experienced by pupils with ASD in their classrooms. This highlights that although teachers may not feel anxiety is the main source of difficulty it is something which is present and needs addressing. It is clear that class teachers have the ability to make decisions regarding provision in their classrooms themselves and are often supported by other teachers in their schools. However the frequency of use of specialist staff, SAL, Educational Psychologists, ASD specialists for example is very low and is perceived by teachers to be an area which could be developed.

Part Three

4.4.1 - Introduction

Using SPSS and NVivo the data generated from part three was analysed to discover the answers to the following research questions.

Aim 3: To explore in depth how teachers teach and organise support for pupils with ASD who show different patterns of social, emotional and behavioural functioning in primary settings.

- a) What is the level of interaction between the pupils with ASD and adults during class lessons?
- b) Do the adults (TA, teacher and SENCO) work in a partnership related to the pupils with ASD? How does this express itself?
- c) Are the pupils with ASD both academically and socially included in class activities?
- d) Are the emotional and behavioural needs of the pupils with ASD being met in the classroom? In what ways are these needs being met?

As described in chapter 3 (methodology) six pupils were selected in total to be cases in part three of this study. These six pupils were selected based on their overall level of social and emotional functioning. Both scales, the RCADS and the SDQ, were taken into account to show the consistent difficulty the pupils are experiencing across the SDQ and more focused RCADS areas. Two highest difficulty scoring pupils, two middle scoring and two lowest scoring were selected to provide a wide range of participants. These pupils were selected from the RCADS and SDQ data analysed using SPSS in part one. The overall set of results are recorded here as appendix 17. The scores of the six pupils selected for part three are shown here in figure 24. The numbers in brackets are the actual scores (T scores for the RCADS and total scores for the SDQ) from which the threshold bands were applied.)

Figure 24: Levels of difficulty of the six pupils selected for part three.

	RCADS Child Total Anxiety	RCADS Teacher Total Anxiety	RCADS Parent Total Anxiety	SDQ Teacher Total Difficulty	SDQ Parent Total Difficulty
Child A	No Difficulty (41)	Difficulty (78)	Difficulty (91)	Difficulty (19)	Difficulty (18)
Child B	No Difficulty (58)	Difficulty (70)	Difficulty (70)	Difficulty (16)	Difficulty (17)
Child C	No Difficulty (43)	No Difficulty (64)	Borderline (65)	Borderline (14)	Difficulty (20)
Child D	Borderline (65)	No Difficulty (47)	No Difficulty (54)	Borderline (13)	Difficulty (20)
Child E	No Difficulty (55)	Difficulty (79)	No Difficulty (48)	No Difficulty (10)	Difficulty (17)
Child F	No Difficulty (57)	No Difficulty (60)	Difficulty (75)	No Difficulty (9)	Difficulty (17)

The six participants were selected using both the RCADS and SDQ scores. Therefore these scores were not concerned solely with high anxiety only but all round emotional and behavioural difficulties. The two highest scoring pupils with a complete set of results were selected. These pupils were numbers 23 and 13 in appendix 17 and child A and child B in figure 24. When taking into account the parental responses as well the selection of these pupils was straight forward as their results clearly fell within the most 'difficulty' categories rather than the other pupils as for both pupils the parents and teachers reported difficulties in both the RCADS and SDQ results. Indeed child A and child B had the most 'difficulty' scores out of all the pupils tested. They

both had four 'difficulties' out of a possible of five. For both pupils they scored themselves in the 'no difficulty' range in contrast with the adult results as all the teachers' scores and parents' scores on the RCADS and SDQ results were in the 'difficulty' range. Child A is a boy in year 6 of primary school and therefore is in the 10-11 age group. He attends a mainstream faith school in a modern building all on one (ground) level. This school has an ASD unit attached. Generally child A spends his time between the settings although the school are trying to place him in the mainstream class for the majority of the time now in preparation for his move to secondary school. Child A was very shy and his teacher describes this as his usual demeanor and personality. Child A was aware of the researcher's presence in the school and there was a strong feeling that he disliked having an ASD disorder of which he was aware. Perhaps his ability to notice and recognise the difficulties he experiences compared to his mainstream peers may in turn lead to further anxiety. He greatly preferred being with the other boys his age in the mainstream classroom rather than be withdrawn and feel different in the small group setting of the ASD unit. Child B is an 8 year old girl in a mainstream non-denominational primary school. Child B's school is a large, well-established school of over 100 years in a Victorian building. The classrooms surround an old, large hall where the pupil often works. The large hall is also used as a library and meeting place and is therefore busy with staff and children walking through. Child B was rather shy at first but became more relaxed and talkative to the researcher during subsequent visits. Child B exhibited evidence of self-harm during one of the visits and was keen to show the researcher the toys she had in her box which she could use to help to calm herself down. It was unsurprising therefore that child B's results indicated a high level of difficulty.

The middle scoring pupils were selected as pupil numbers 5 and 16 in appendix 17 and child C and child D in figure 24. These pupils both had middle scores - 2 'borderline' and a mixture of 'difficulty' and 'no difficulty' ratings. As it had been planned to take into account the teachers' views over that of the parents as they have a better view of classroom activity, it was important that at least one of the middle 'borderline' results were within a teacher response. Both child C and child D have a 'borderline' result from their teacher. The final middle scoring pupils to be selected therefore were numbers 5 and 16. Child C was a pupil from a mainstream, faith primary school. He was 7-8 years old and was talkative and outgoing. Child C joined

in all activities at his modern, one (ground) floor school and interacted with the adults and his peers when he wanted something. Child C was very confident and was not self-conscious unlike child A and child B. There was an ASD unit attached to child C's primary school and he uses the facilities there, generally in the morning. Child C appeared to be content in either environment. Child D was a nine year old boy attending a mainstream, faith school. He had been highlighted on SEN forms for several years at school but as he appeared to be coping well there seemed to be little actual interventions or support taking place either now at this present time or in previous years. Child D was interested in this study and took time to think about his responses to the questions asked. Child D's school was modern and all on one (ground) level.

The selection of the two lowest scoring pupils was a little more open as several pupils had results which fell in this area. The two lowest scoring pupils were eventually selected as numbers 31 and 10 in appendix 17 and child E and child F in figure 24 by following the following selection criteria. Firstly the results in appendix 17 were examined to find if there were any pupils who scored in the 'no difficulty' category across all the SDQ and RCADS findings. There were no pupils who scored 'no difficulty' in all the categories. As planned the teachers' ratings were then given the higher priority over the parents as it was felt that the teachers would have a clearer understanding of the children in their classroom environment in which this study was interested. Child F was chosen as he had low teachers' ratings in both the RCADS and the SDQ. Although 10 pupils scored three or more 'no difficulty' ratings, within this group pupil number 10 (child F) was selected as this pupils scored a 'no difficulty' rating for both teacher responses. As there were still a selection of pupils within this criteria which would be suitable for the other low scoring pupil, as planned it was decided to take into account gender. As only one girl had been selected so far, a girl was chosen to add to the selected pupil for diversity – number 31 (child E). The other pupils were boys or from the same school. As all these pupils had scored in the lowest group it was felt the study would benefit from having a pupil from a different gender and school. Child E therefore was a girl aged 8. She attended a mainstream, non-denominational primary school. Child E appeared to be nervous in class and was by nature a quieter child. She was able to actively engage with the questionnaire and interview and often paused to consider her responses. During the interview and

questionnaire child E exhibited excellent attention, listening and behaviour which her class teacher and SENCO noted was consistent with her everyday behaviour. Child F was a boy aged 10 -11 in a mainstream, non-denominational primary school. He like child A, seemed to be aware of his ASD diagnosis and wanted to remain with his peers. Child F was a solitary figure in the classroom and very rarely interacted with others. He was noted as having some difficulties in managing his emotions at times while being at all other times withdrawn. Child F was a tall pupil in his class and physically appeared to be the most mature pupil in the classroom.

During the observations (appendix 28) the level of interaction between the adults and pupils with ASD was recorded. Two observations were carried out per child during different lessons and times of the school day. Each observation lasted for 30 mins. As described in chapter 3 coding was carried out during each minute of the observations resulting in 60 data points recorded per child (one every minute during the two 30 minute observations). These points of interest included the collection of data regarding the location of the pupil, the pupil context and the nature of the pupils' interaction with adults.

Firstly the results from each child are displayed. These individual case study results provide greater clarity and level of detail concerning the school experiences of pupils with ASD.

The following headings raised are inherent to each case study. They are based on the research questions for part three of the study. Using both the qualitative and quantitative data generated through the observations and interviews the following data was generated.

4.4.2 – Individual case study results

4.4.2.1 - Child A (figure 25)

Level of interaction between the adults and the pupils with ASD during lesson time

During the observations child A was working as part of the whole class for most of the time (93%). For over three quarters of the time (78%) the pupil was not observed being involved in any type of interaction either with adults or pupils. Occasionally he initiated an interaction with another child (13%) but he never

approached an adult. This lack of observable interaction with adults in school concurs with the information gained from the teacher's interview. The teacher stated that the pupil does not interact with staff and added that "*he is working on speaking up at school.*" She also mentioned that in class "*he can write down his questions to break his fear of verbally asking.*" Although there seems to be a difficulty in developing and maintaining a verbal level of interaction between this pupil and staff it is interesting to note that both pupil and teacher believed that they had a good relationship and this was one of the main ways in which the pupil's needs were being met. During the observations there were not any approaches used in interactions between the adults and the pupil.

How adults are working in partnership related to the pupils with ASD

Both the pupil and teacher discussed the different members of staff with whom the pupil works. Although the pupil was very familiar with his class teacher he also could name two other adults but he could "not remember the names" of other staff members. The teacher agrees that there are other adults who work with child A including the Speech and Language Therapist (SALT). The teacher could describe in far more detail how the different adults work in partnership with each other for the benefit of the child.

The class teacher, the teacher in charge, two TA's and some other support staff work with child A and he "*spends some of his time in a small setting within an ASD unit however this unit is attached to a mainstream primary school*". There is also the SENCO and the sports coach. Examples of when the collaboration has worked well is "*when the same staff are involved*" as they know the pupil "very well and he likes people when he has got to know them". The sports coach is an example of this. Although the sports coach had been informed of his needs and areas of difficulty this collaboration did not work well until child A knew the sports coach well as he "*is nervous of new people, is shy before and during meeting new people*".

An example of when collaboration does not work well is with new staff. Even when they are fully informed of child A's needs the start is always difficult. It takes a while until child A gets used to them. He is "*very passive*" and has anxiety over new

situations and people – *“...is very anxious... things work well when the same staff are involved. The staff know [the pupil] very well and he likes people when he has got to know them. The sports coach is an example of this (difficulty). Although the sports coach knew [the pupil] and had been informed of his needs and areas of difficulty this collaboration did not work well until [the pupil] knew the sport coach well.”*

The class teacher values the support of SALT and is pleased that this external specialist person is available to support child A in his school. The teacher works with SALT *“in managing his emotional and behavioural needs”*. Some sessions have been about *“autism and about its strengths and challenges”* which have been very beneficial for this pupil. The teacher works closely with the SALT however there are other adults in school as well. Each class has their own teaching assistant and although this pupil *“gets on really well with the teaching staff at the school”* the teacher realises that *“he does prefer some staff to others”* and that this may be a problem as he progresses to secondary school and the teacher knows that *“he is worried about the transition to secondary school.”* During the observations there was no observed interaction between the class teacher and the other adults.

Are the pupils with ASD academically and socially included in class activities?

The teacher feels that the pupil is included both academically and socially into the class. She states that she believes he *“approaches his learning with a good attitude”* and *“is very polite in school”*. Academically he wants to please and *“is very positive in lessons”* however finds some subjects much more challenging. Child A is included in the work set however *“he finds maths more challenging”* and *“forgets new concepts quickly”*. Child A himself feels the same as his teacher. He says he is *“happy”* in the classroom and feels the work set is fine for him especially in *“Literacy and grammar”* however he finds Maths more difficult to the extent that he *“does not think [he] has made progress in Maths”*. Child A noted that the staff included him in the lessons and *“help [him] a lot”*. Generally speaking though the pupil believes that he can complete the work set in his class.

Socially the teacher describes this pupil as appearing *“very anxious”* with *“good days and bad days”* as *“he is always thinking about things and tends to*

overthink everything. He analyses and worries about things which happen in the school day.” The teacher has noticed that *“he likes to be with his peers in mainstream classes and has become more sociable.”* She mentioned that he has friends in his class however is somewhat quiet and withdrawn from them. If he has a problem with the other children he generally just cries as this is the only way in which he is able to deal with these emotions. Child A spoke about his friends and that he would like more friends in school. However when asked he said he preferred adults to children and would stay with adults if given the chance.

Are the social, emotional and behavioural needs of the pupils with ASD being met in the classroom? In what ways are these needs being met?

The teacher believes that the pupil’s needs are being met as he is happy to be in school and wants to please the teacher. The teacher described his behaviour as good in school. During the observations 100% of the time the pupil did not show any signs of distress or behaviour confirming the teachers comments regarding his contentment in school reflecting that his needs are being met. During the observations child A appeared to be engaged in the lessons. 97% of the time the pupil had at least an apparent interest in the lesson and 47% of the time a good or more interest showing that the lesson was accessible to him. The teacher discussed how the pupil’s needs are being met through good adult relationships, emotion lessons, use of a worry box, SALT and repetition of teaching. She spoke again about the use of specialist staff, SALT, and the important role they play in including the pupil into class activities.

The pupil felt that he is being included in the class’s academic activities in agreement with the teacher. He described the help the adults give to him during school but did not recognise the use of external specialists. The main reason he felt the school were supporting him was through the good relationships he has with school staff which is something the teacher mentioned as well. He believes he is well behaved at school and could not think of a time when he finds managing his emotions difficult reflecting how well he thinks he is doing at school in this area. Child A could not think of anything else which could be changed at school which would either help his management of emotions or behaviour as he is satisfied with both.

Figure 25: Child A case study results (Year 6 – Art and Literacy/Drama observed)				
Dimension	Data			
Location of interactions between adults and pupil	In classroom = 100% (60/60)			
Pupil context	With the whole class = 93% (56/60) With peer 1:1 = 7% (4/60)			
Type of interaction	No interaction = 78% (47/60) Initiating and responding = 13% (8/60) Responding = 8% (5/60)			
Adults supporting the pupil	Teaching assistant			
Inclusion in class activities	Observations			
	Extra support observed	Specific	None = 100% (60/60)	
		Middling		
		General		
	Teacher opinion			
	Academic inclusion	Enjoys learning Interacts with adults Interacts with peers Want to please	✓ X ✓ X	
	Social inclusion	Has at least one friend Attitude to peers Reactions to problems	✓ Quiet/withdrawn/calm Cries	
	Pupil opinion			
	Academic inclusion	Feels included Enjoys learning Has difficulty learning/distracted Is able to complete work set	✓ ✓ ✓ ✓	
	Social inclusion	Has at least one friend Would like more social interactions Prefers adults or children	✓ X Adults	
	Extent and ways in which needs are being met	Approaches observed	None = 100% (60/60)	
		Level of interest in lesson observed	Some apparent interest = 47% (28/60) Good level of interest = 37% (22/60) Intense involvement = 10% (6/60) A hint of interest = 3% (4/60)	
		Behaviour of pupil	None = 100% (60/60)	
Teacher opinion				
Are pupil's needs met?		✓		
Ways needs are met		Through good adult relationships Emotion lessons/booklets Worry box SALT Repetition		
Use of specialist staff?		✓		
Are pupils well behaved?		✓		
Pupil opinion				
Are pupil's needs met?		✓		
Do adults support the pupil?		✓		
Ways needs are met		Through good adult relationships		
Use of specialist staff?		X		
Are pupils well behaved?		✓		
Times when managing emotions is difficult		X		
Suggestion of any changes?		X		

4.4.2.2 - Child B (figure 26)

Level of interaction between the adults and the pupils with ASD during lesson time

Child B was a girl in year 4. Most of her time (88%) was spent in the classroom with the teacher as part of the whole class. This was accompanied by a very small amount of time (7%) when the pupil had the teacher's attention 1:1. Most of the time (88%) this pupil did not interact with anyone. 7% of the time however she did initiate an interaction and therefore was not wholly passive responding only when someone else approached her.

The teacher described how the level of interaction between herself and this pupil is generally low as reflected in the observations. The main time when interaction is increased is in the mornings when the pupil comes to school which is not a time when the observations took place. The teacher feels that pupil interacts with her at those times through crying and tantrums. The teacher feels that this "*is just learnt behaviour*" and that the pupil is "*very self-involved and her emotions always come first...the pupil can come across as rather selfish in this regard.*" The pupil herself did not mention interacting with her teachers (two teachers as there is a job share in place) during her interview. The pupil spoke only about interacting with the teaching assistant as she takes her out of class when she "*is stressed*" and how she likes this. Therefore, there does not seem to be much interaction between the adults and pupil except when the pupil is experiencing difficulties. The only observable approach used in the interactions between the adult and the pupil was the general teaching approach of using a calm voice which occurred only 2% of the time.

How adults are working in partnership related to the pupils with ASD

The teacher discussed the different members of staff with whom the pupil works. As with child A, child B could describe the teacher, the teaching assistant and a teaching assistant from another class, but not really what they do in school to help her to access her learning. She did describe how they take her "*from her class*" if she is "*feeling stressed*" or feeling emotional and "*the staff are good at calming [her] down*". Sometimes she goes outside to go to her "finishing off tray" which she also likes.

The class teacher was more descriptive and said that she *“regularly collaborates with another teacher to teach this child as the class teacher role in this class is a job share”* (one two days and the other teacher three). In addition there is a TA who helps the pupil with *“transition times”*. This pupil does not have a 1:1 and there isn't any programme which the pupil follows. The teacher feels that the TA, works well with the teacher as she *“supported this pupil's class last year and therefore knows all the children quite well”*. With reference to this pupil the TA understands that the pupil suffers from anxiety and is aware of the triggers for this. The TA is able to remove the pupil from the classroom when this issues become apparent. Also the TA is aware that the pupil finds flies and the presence of fruit stressful. The reason why collaboration with the TA works so well for the teacher is that the TA knows the pupil very well and is able to initiate the removal of the pupil from the classroom herself. The TA can identify the reactions to these triggers herself.

The teacher finds collaboration with other TAs is not so successful. Sometimes other staff members give the pupil too much attention and pander to her too much. The teacher feels that this pupil needs to develop her independence skills. The example of her anxiety over the presence of flies in the classroom – some staff create a fuss and take her away for a long period when this occurs however the teacher feels that the pupil *“needs to be exposed to flies as she will encounter them in her life and she needs to develop ways in which she can handle her anxiety rather than just taking her away immediately”* and for a prolonged period. The teacher feels that other TAs are *“too kind”* to her and do not see the full picture of her education. The teacher feels that the other TAs give her instant reactions and exactly what she wants. They will remove her from the classroom for long periods and the result is she does not finish her work and her books therefore have much less work than her peers. As a teacher she needs evidence in children's books of their attainment and if TAs keep taking the pupil away for long periods then the evidence in the pupil's book is lacking. The teacher reported there has not been any support recently from specialist staff.

Are the pupils with ASD academically and socially included in class activities?

The teacher believes child B is included academically in the classroom. She stated that the pupil enjoys learning, *“is very well behaved...understands the rules...does the right thing and is of high ability.”* The teacher mentioned that child B *“prefers to work with girls”* and sometimes this is possible as the teacher moves *“the children to new seats every week”*. Although sometimes child B may be sitting next to a boy the teacher feels that this does help child B to work with different pupils and not remain in her comfort zone unchallenged. The teacher says that the basket child B has on her desk containing different items also allow her to academically access the curriculum as *“she can choose to use (them) whenever she wishes”*. The items include *“a ball to squeeze, ear defenders, fiddle toys and a vibrating snake”*. By using these items the teacher feels that the pupil can *“regulate her emotions”* and remain with the rest of her peers working in the classroom. The pupil was observed to use the ear defenders 35% of the time during the observations. Child B had a range of interest in the class’s activities during the observations. Sometimes she was fully engaged (8%) but at other times not at all (3%). The rest of the scores fell in-between the two extremes indicating that the inclusion the pupil feels in the classroom is varied as her interest rises and falls. Socially the teacher feels that child B *“has the usual friendships for someone her age”*. Although she does have some friends who are girls in school she *“likes to tell tales on the other children and can get them into trouble.”* Usually in class she *“sits quietly...and occasionally interacts with others.”* The teacher believes that generally with her peers she is quiet and when she encounters a problem she may self-harm.

The pupil herself feels included in the academic life of the classroom. She can complete her work in the classroom but prefers to be taken *“outside the classroom to work with”* the teaching assistant showing that this is a regular occurrence. Socially child B would rather *“work in the classroom with the other children”* nearby but prefers adults to children. Child B was able to list some other girls in her class with whom she is friends. She described how she maybe she would like more friends in school.

Are the emotional and behavioural needs of the pupils with ASD being met in the classroom? In what ways are these needs being met?

The teacher believes that the school are meeting the pupil's emotional and behavioural needs "well". The teacher notes that child B is "very well behaved in school" and "is never in trouble" after the start of the school day. Her anxiety in school is shown by self-harm rather than any other type of behaviour. Although the teacher acknowledges that child B does scratch herself during anxious moments the teacher believes these are dealt with by the employment of the teaching assistant/good adult relationships and the sensory toys. The teaching assistant removes the pupil from the class during distressing times and the pupil can self soothe using the sensory toys. The pupil is old enough to select the toys when she needs them however "she is directed to use the snake three times each day – morning, lunchtime and home time – as these are often the most anxious times for her." The teacher feels that the school "is stretched financially and money is very limited" but the resources they do have "do all work". The teacher also mentioned that child B's "triggers change and (she) is unsure why" and therefore it is not possible to react quickly and support the pupil at these times.

The pupil feels that her needs are somewhat met and she is "only sometimes happy at school." Within her academic lessons she finds it difficult to concentrate and "is taken outside" to finish her work. There are often times when she feels "stressed" when completing her work but "the staff are good at calming" her down. She feels "stressed when the work is too hard." Child B reported that she finds it difficult to regulate her emotions when "there are big changes to the school day (and she) worries and this makes completing...school work much harder." When this happens child B reported that she then starts to scratch herself and showed the marks on her arms and legs. This was not observed during the observations for this study as child B scored 100% for exhibiting no noticeable distressing behaviour. After she scratches she "does not feel good". However child B does think she "is getting on better with (her) learning" now and could not think of anything which would make managing her emotions during her school day easier. She agreed with her teacher that her needs are met through good adult relationships and the use of sensory toys but also added the usefulness of group work for her and removal from the classroom. Child B does not believe she needs any more help with behaviour at school as she "behaves well in class."

Figure 26: Child B case study results (Year 4 – Literacy writing and Drama observed)

Dimension	Data			
Location of interactions between adults and pupil	In classroom = 100% (60/60)			
Pupil context	With the whole class = 88% (53/60) With teacher 1:1 = 7% (4/60) With peer 1:1 = 3% (2/60) With peers in whole class 2% (1/60)			
Type of interaction	No interaction = 88% (53/60) Initiating and responding = 5% (3/60) Responding = 5% (3/60) Initiating = 2% (1/60)			
Adults supporting the pupil	Shared pupil support assistant, teaching assistant			
Inclusion in class activities	Observations			
	Extra support observed	Specific	Ear defenders = 35% (22/60)	
		Middling	None = 62% (37/60)	
		General	Calm voice 2% (1/60)	
	Teacher opinion			
	Academic inclusion	Enjoys learning Interacts with adults Interacts with peers Want to please	✓ X X X	
	Social inclusion	Has at least one friend Attitude to peers Reactions to problems	✓ Quiet Self-harm	
	Pupil opinion			
	Academic inclusion	Feels included Enjoys learning Has difficulty learning/distracted Is able to complete work set	✓ X X X	
	Social inclusion	Has at least one friend Would like more social interactions Prefers adults or children	✓ ✓ Adults	
	Extent and ways in which needs are being met	Approaches observed	None = 65% (39/60) Ear defenders = 35% (22/60) Calm voice = 2% (1/60)	
		Level of interest in lesson observed	A hint of interest = 40% (24/60) Good level of interest = 25% (15/60) Some apparent interest = 23% (14/60) Intense involvement = 8% (5/60) Notices but ignores = 3% (2/60)	
		Behaviour of pupil	None = 100% (60/60)	
		Teacher opinion		
		Are pupil's needs met?	✓	
Ways needs are met		Through good adult relationships /Sensory toys		
Use of specialist staff?		X		
Are pupils well behaved?		✓		
Pupil opinion				
Are pupil's needs met?		½		
Do adults support the pupil?		✓		
Ways needs are met		Through good adult relationships/Small group work/ Removal from the classroom/Staff explanations		
Use of specialist staff?		X		
Are pupils well behaved?		✓		
Times when managing emotions is difficult		Starting the school day/Changes to the school day/work is too hard		
Suggestion of any changes?	X			

4.4.2.3 - Child C (figure 27)

Level of interaction between the adults and the pupils with ASD during lesson time

Interactions between adults for the benefit of the pupil

Child C is a boy. His parents reported that he is experiencing a high level of total difficulty however his teacher reported only borderline difficulties. During the observations child C was in the classroom with the teacher 100% of the time and therefore had every opportunity to interact with her. 60% of the lesson was spent with the pupil just listening along with the other children. 55% of the time the pupil was not observed interacting with anyone. As the lessons progressed others did interact with child C. 28% of the time observed the pupil did respond to others however only 7% of the time either initiating or responding was spent with the teacher and a much larger percentage 30% with the teaching assistant.

During the interviews the teacher confirmed that her interactions with the pupil were limited to when he is *“impulsive”* and when he *“continues to lash out without thinking”*. This was not seen in the observations. The teacher mentioned that she has to interact with him about his behaviour as he needs *“constant reminders about how to manage his emotions”* although this also was not seen during this study. The pupil himself believes that he does interact with the staff and that *“everyone listens”* to him with the exception of the head teacher who *“is a grumpy head teacher”* which may reflect the head teachers role of maintaining discipline. Therefore, as the teacher reported most interactions with the pupil occur when he required behaviour reminders and no such behaviour was observed during the observations, the level of interaction between the teacher and child C was low. The interactions which were seen were only of a general primary approach and did not appear to be approaches developed for pupils with ASD. The use of a calm voice, calling the pupil's name and checking he understood the task were the approaches witnessed during 35% of the observations.

How adults are working in partnership related to the pupils with ASD

Child C could describe the different adults who work with him – his class teacher, another lady *“in the special room”* and sometimes he interacts with the head teacher. He believed that both teachers help him *“to learn as they talk”*.

The class teacher noted that several staff work with Child C in addition to herself. There are two TA's in the mornings and a PSA who works as a 1:3 with two other children. The staff have worked well together to try to help child C in competitive situations. The staff all know child C very well including his strengths and difficulties. Child C struggles in group situations especially when he does not win. He finds turn taking very difficult when playing games or in competitions. Specialist support is provided by SALT who help with this through *"enrichment activities"* and he *"is generally OK now in groups in the classroom but not outside in the playground"*. The staff can see he has improved as he is now a lot calmer and less aggressive. They report that there are fewer aggressive incidents at school now. He can listen to known adults now whereas before there was just hysteria. The strategies used include *"the calm down chair and the keyring ... with time out, prompts and stress toys"* for example.

Examples when the partnership does not work so well included playtime arrangements *"as different people are on duty and he is with a wider range of children from throughout the school with all different abilities"*. *"He does not understand all the rules of the different games the children play especially football. This leads to him believing that the other children will not let him play when this is not the case."*

Are the pupils with ASD academically and socially included in class activities?

The teacher believes that child C is included academically and socially in his class. Academically he enjoys his learning and *"is a perfectionist and tries very hard with his school work."* He is *"a quiet pupil in the classroom"* and he like to complete his work especially *"in small group settings."* He *"is very passive and will sit and listen. He is not disruptive in class"* as he generally understands the work set. If child C finds something challenging in class he will become *"distressed ... and ... frustrated."* During the observations the level of interest the pupil showed varied widely from notices the activity but ignore 2% to intense involvement 42%. The intense involvement score was by far the most observed level of interest in child C's scores. This indicates that for most of this child's time at school he is engaging with the curriculum offered. Socially he *"gets on very well with the other children,*

particularly with his group of friends” and is included in their games. However he can get *“rough”* as he does not understand the rules of games particularly football. He is generally quiet around the other children however when a problem develops he is violent and cries. He *“lashes out”* preceded by *“crying”*.

Child C himself feels included in the classroom and enjoys his learning. He works with *“many”* members of staff although he likes to *“work in the classroom with the other children.”* Although he *“is happy at school”* he finds some areas of the academic curriculum difficult. He finds *“painting and writing the hardest things...at school...but the teachers explain things.”* Inclusion in assemblies are a source of worry for child C as he feels that the awards given out there do *“not help him to learn but instead make (him) worry.”* Socially Child C mentions that he has a lot of friends in school but in agreement with the teacher he feels that he finds inclusion difficult at playtime. He gets *“bored and sad”* when other children will not play with him and says *“I get upset”* when the other boys are playing football. *“They don’t care about me and don’t play with me.”*

Are the emotional and behavioural needs of the pupils with ASD being met in the classroom? In what ways are these needs being met?

The emotional and behavioural needs of child C are being met by the school according to the teacher through the use of specialist staff (SALT) and the attention of teaching assistants. The teacher herself was observed to be using only a general approach with child C during the observations – calm voice/calling his name/checking he understood the task – 35% of the time. The rest of the time child C was simply continuing to manage his behaviour and emotional needs alone. During the observations child C was observed to exhibit some different behaviours. Although for 70% of the time the pupil exhibited no observable behaviours, 27% of the time he was observed to be rocking and 3% perseveration. Generally the teacher believes that child C’s behaviour is *“very good”* and *“there have not been any examples of [child C’s] behaviour which...[is].. puzzling.”* As mentioned previously playtime can be a problem for child C as although *“he gets on very well with other children”* he can only regulate *“his emotions by crying and then lashing out.”* During football sessions he *“finds it difficult to understand that when he is not kicking the ball or scoring a goal it is not the other children’s fault. They are not*

stopping him from playing but he is not good enough to get to the ball.” The school are supporting him very well in this area through the use of *“a key ring which has different options available to him”* which are picture designed to help him to *“calm down”* and *“time out”* and a *“selection of squeezezy toys”*. As these negative behaviours are only in the playground the teacher believes that he is being well supported in his emotional and behavioural needs in class.

Child C agrees that his needs are being met in school and agrees with his teacher that the good relationships he has with adults working in the school are a way in which this is achieved. He also believes that small group work, removal from class and staff explanations help him as well. Child C acknowledges with his teacher that playtime is an emotional and behavioural issue for him but he was not able to describe if his needs are being met in this area as his teacher was able to do so. He was also unable to think of anything else which may increase the extent to which the adults can help him to manage his behaviour and emotions in school as he believes that overall he *“behaves well at school.”*

Figure 27: Child C case study results (Year 1 – Art and Literacy observed)				
Dimension	Data			
Location of interactions between adults and pupil	In classroom = 100% (60/60)			
Pupil context	With the whole class = 60% (36/60) With teaching assistant 1:1 = 30% (18/60) With teacher 1:1 = 7% (4/60) With peers 1:1 = 3% (2/60)			
Type of interaction	No interaction = 55% (33/60) Responding = 28% (17/60) Initiating and responding = 15% (9/60) Initiating = 2% (1/60)			
Adults supporting the pupil	Shared pupil support assistant, teaching assistant			
Inclusion in class activities	Observations			
	Extra support observed	Specific	None = 65% (39/60) Calm voice/call name/checking 35% (21/60)	
		Middling		
		General		
	Teacher opinion			
	Academic inclusion	Enjoys learning Interacts with adults Interacts with peers Want to please	✓ X X X	
	Social inclusion	Has at least one friend Attitude to peers Reactions to problems	✓ Quiet Violent/cries	
	Pupil opinion			
	Academic inclusion	Feels included Enjoys learning Has difficulty learning/distracted Is able to complete work set	✓ ✓ X X	
	Social inclusion	Has at least one friend Would like more social interactions Prefers adults or children	✓ ✓ Adults	
	Extent and ways in which needs are being met	Approaches observed	None = 65% (39/60) Calm voice/call name/checking 35% (21/60)	
		Level of interest in lesson observed	Intense involvement = 42% (25/60) Some apparent interest = 25% (15/60) Good level of interest = 22% (13/60) A hint of interest = 10% (6/60) Notices but ignores = 2% (1/60)	
		Behaviour of pupil	None = 70% (42/60) Rocking = 27% (16/60) Perseveration = 3% (2/60)	
Teacher opinion				
Are pupil's needs met?		✓		
Ways needs are met		SALT /Attention of teaching assistant/sensory toys/time out		
Use of specialist staff?		✓		
Are pupils well behaved?		✓		
Pupil opinion				
Are pupil's needs met?		✓		
Do adults support the pupil?		✓		
Ways needs are met		Through good adult relationships/Small group work/ Removal from the classroom/Staff explanations		
Use of specialist staff?		X		
Are pupils well behaved?		✓		
Times when managing emotions is difficult		Awards given in assembly/painting/writing/playtime		
Suggestion of any changes?		X		

4.4.2.4 - Child D (figure 28)

Level of interaction between the adults and the pupils with ASD during lesson time

Child D is a boy in year 4. Child D also spent most of his time in the classroom with the rest of his class and their teacher (93%). He only left the main classroom to get things from the cloakroom. 73% of the time child D was observed he was listening to the teacher along with his peers. This resulted in 60% of the time no interaction being observed. Child D did initiate and respond 25% of the time he was being observed showing that the pupil is not passive in the classroom. This is reflected in the teacher interview where the teacher stated that he does interact with the teacher but *“really dislikes being told off”* and finds it *“difficult to accept when he make mistakes in his work and tends to make the same mistakes again and again.”*

During the observations only 2% of the time adults used identifiable approaches when interacting with the pupil. This approach was only a general primary school approach of speaking in a calm voice to the pupil. There did not appear to be any interaction which was specifically designed for a pupil with ASD. The pupil mentioned that he does interact with adults during lesson time – if he does not understand he asks his *“class teacher and he helps...by explaining it again.”* Child D also discussed other staff members with whom he interacts but these were not seen during the observations. He mentioned a TA supports him *“sometimes in class”* and the SENCO who used to show him *“pictures of shapes and pictures of people smiling but she doesn’t do this anymore.”*

How adults are working in partnership related to the pupils with ASD

Child D discussed his class teacher and the SENCO at his school as mentioned above in addition to two teaching assistants who *“hear (him) read sometimes outside the classroom.”* Child D thinks that the class teacher especially helps him *“by teaching him”* and he *“is very good at sharpening pencils and ...helps ... when...a pencil (snaps) ... very quickly.”*

The class teacher describes how two assistants are available (a Pupil Support Assistant (PSA) not assigned to this child) who run Emotional Literacy Support Assistant (ELSA) and a TA who *“just checks he is on task”*. The class teacher *“does the main work”*. The SENCO *“used to run a social skills session with him working on*

shapes and pictures of people smiling after school but this has since stopped.” The teacher feels that the ESLA session work well as the lady has been trained in this and she knows the child as she has worked at the school for several years. Support partnership does not work well when there is one assistant for a few children and the assistant *“lacks the ability to move between the children”*. When the assistant is *“spread too thinly across children with different needs and she lacks the required skills”*.

Are the pupils with ASD academically and socially included in class activities?

The class teacher believes that the pupil is included both academically and socially in his class. Within lessons the pupil is happy and enjoys learning. The teacher thinks that the pupil wants to please and *“wants to do well in school and responds well to praise”*. The teacher tries to include the pupil in academic tasks by including him in using the ‘happy face’ on the whiteboard to support behaviour in the class. This is a general behaviour approach for all the children however child D *“is always one of the first children to respond as he likes his name to be listed there.”* Child D *“works hard in school as he always wants to do his best.”* During the observations the pupil was observed to have 70% intense interest in his lessons highlighting that this child is very interested in his work and therefore finds the work set of an achievable standard. During the observations 98% of the time the pupil did not receive any additional support from any member of staff. 2% of the time the teacher spoke to him in a general calm manner which is not unlike how some of the other children in the class were approached. The pupil appeared to be included along with the rest of his peers in the lessons observed and child D just joined in. Socially the teacher believes child D is very much included in his class. He has friends in school and he *“is well liked by the other children and no child dislikes him.”* During lesson time he *“can be chatty to his friends”* and *“can always find a friend to become involved with during playtime.”* During lesson times he gets *“involved in naughtiness with others ... if something is happening (and) will join in”*. However if he has a problem with another child, for example if another child touches him, *“he will hit back ... this retaliation is not rare or unusual.”*

The pupil however “*does not like the work set in school*” but does believe that he is “*is getting along with his learning*”. This implies that he can access the curriculum he would just prefer to be doing something else. Child D could name several children in his class with whom he is friends and believes he generally “*gets along well with the other children*” discussing how he is socially included with his peers. Child D did not appear to believe that when included with his peers he has any problems such as the ones mentioned by his teacher. Therefore child D felt included and happy with his peers.

Are the emotional and behavioural needs of the pupils with ASD being met in the classroom? In what ways are these needs being met?

The teacher notes that child D does have emotional and behavioural difficulties however he believes that these are being managed by the school. When child D does experience emotional difficulties “*he freezes and blushes*”. These needs are being met by ELSA 1:1 sessions run by a teaching assistant. His teacher notes that his emotional ties to things last far longer than the other children although this is not a problem. An example of this was his attachment to ‘fidget spinners’ which the other children have now outgrown whereas he is still very much interested. Child D has also received support regarding an obsession he had with another girl in his class. “*He made a booklet for her with multiple choice questions – ‘do you like me?’ etc*”. The teacher believes the pupil’s needs are therefore being met through good adult relationships and ELSA.

The pupil agrees that his emotional needs are being met in school but that he does not have behavioural needs. During the observations child D was not observed to exhibit any type of distressing behaviour. He believes that working in small groups helps him. He finds he needs support when writing and speaking in front of the class. His behaviour “*in my opinion*” is good but feels he could be supported further emotionally by a relaxation of certain rules at school such as “*softer rules on toys in school...to have his fidget spinner in class*” which may reflect the needs for some sensory toys.

Figure 28: Child D case study results (Year 4 – Religious Education and Design and Technology observed)			
Dimension	Data		
Location of interactions between adults and pupil	In classroom = 93% (54/60) In a corridor outside the classroom = 7% (4/60)		
Pupil context	With teacher with the whole class = 72% (43/60) With peers in whole class = 13% (8/60) With peers 1:1 = 7% (4/60) With peers in a group = 7% (4/60) With teacher 1:1 = 2% (1/60)		
Type of interaction	No interaction = 68% (41/60) Initiating and responding = 25% (15/60) Responding = 7% (4/60)		
Adults supporting the pupil	Pupil support assistant 1:1		
Inclusion in class activities	Observations		
	Extra support observed	Specific	None = 98% (59/60)
		Middling	
		General	
	Teacher opinion		
	Academic inclusion	Enjoys learning	✓
		Interacts with adults	✓
		Interacts with peers	X
		Want to please	X
	Social inclusion	Has at least one friend	✓
		Attitude to peers	Freezes/blushes Violent/struggles to accept mistakes
		Reactions to problems	
Pupil opinion			
Academic inclusion	Feels included	✓	
	Enjoys learning	✓	
	Has difficulty learning/distracted	X	
	Is able to complete work set	X	
Social inclusion	Has at least one friend	✓	
	Would like more social interactions	X	
	Prefers adults or children	Adults	
Extent and ways in which needs are being met	Approaches observed	None = 98% (59/60) Calm voice = 2% (1/60)	
	Level of interest in lesson observed	Intense involvement = 70% (42/60) Good level of interest = 17% (10/60) A hint of interest = 10% (6/60) Some apparent interest = 3% (2/60)	
	Behaviour of pupil	None = 100% (60/60)	
	Teacher opinion		
	Are pupil's needs met?	✓	
	Ways needs are met	Through good adult relationships/ELSA	
	Use of specialist staff?	✓	
	Are pupils well behaved?	✓	
	Pupil opinion		
	Are pupil's needs met?	✓	
	Do adults support the pupil?	✓	
	Ways needs are met	Small group work	
	Use of specialist staff?	X	
	Are pupils well behaved?	✓	
	Times when managing emotions is difficult	Speaking in front of the class Writing	
	Suggestion of any changes?	More toys allowed in school	

4.4.2.5 - Child E (figure 29)

Level of interaction between the adults and the pupils with ASD during lesson time

Interactions between adults for the benefit of the pupil

Child E is a girl in year 4. During the observations 100% of the time she was in the classroom with her peers and 97% of this time was spent not interacting with anyone. She did not initiate an interaction with anyone at all and only responded to someone 5% of the time. Therefore the level of interaction between this pupil and the adults was non-existent during the observations for this study. Despite this her teacher believes that she does have a good relationship with the adults in school and that she does interact with them. He mentioned that she *“likes and trusts him”* and that *“she listens to him...this relationship took a term to build.”* The teacher also mentioned that child E does not like new people and *“was very fond of the last TA who used to sometimes work with her ... (but)... resigned”*. The new teaching assistant *“does not have much time, if any, with (her)”* and so she does not interact with him as she *“does not know him well at all and this relationship is yet to be built up.”* The pupil confirmed this lack of interaction with the teaching assistant as she was *“unsure of what he does at school and whether or not he is a teacher.”* She explained that there is a level of interaction between herself and her teacher albeit a low level one – he *“helps ...to learn...and explains things”*. During the observations the only interaction between the teacher and this pupil was when he repeated instructions 5% of the time. Therefore 95% of the time there was no interaction at all.

How adults are working in partnership related to the pupils with ASD

Child E mentioned her class teacher and how well he helps her to learn – *“he especially helps (me) to learn as he asks ...lots of questions and explains things.”* As previously mentioned child E is unsure what the teaching assistant does in school as he is new and she takes a long time to warm to people.

The class teacher mentioned specialist staff who have worked in partnership with him for the benefit of this child. The ‘Lego’ therapy provided by SALT worked very well as *“SALT left ideas and instruction concerning how these sessions should be run and the TA continued with them...in between SALT visits.”* The previous

teaching assistant was very good and discussed what child E *“should do when she feels that she is stuck in Numeracy”*. This worked well as child E *“liked the TA and she understood why she was talking about this problem”*. Child E *“likes to know why she is doing something. The main reason why this worked so well however was that the TA built a good rapport with her.”*

The partnership between the adults for the benefit of the child do not work very well when music is involved. *“Music lessons are covered by another teacher as part of the class teacher’s PPA time. This teacher does not know (child E) as well as this lesson is only once a week and so cannot build the level of rapport which (child E) responds to so well”*. She does not like Music lessons as *“she is very passive and does not like to perform or sing at all”*. The class teacher feels that (child E) *“does not like Music as she does not like to perform even in class as part of an assembly or as part of another lesson.”*

Are the pupils with ASD academically and socially included in class activities?

Once again the teacher believes that the pupil is included both academically and socially in her class. Academically the pupil likes learning and wants to please although she *“has lots of worries and appears to be very anxious in school”*. Her like of learning is apparent in her level of interest in the lessons observed. She received marks throughout the range of interest on the 6 point scale (appendix 34) highlighting how sometimes she is very connected and included in the academic life of the class and other times not at all. Socially child E *“is very introverted and finds it very difficult to speak about her feelings”*. However in class *“she does have a sense of humour though and likes to joke and have fun”* with the other children. She does have *“some good friends in the class....all...girls”*. Child E *“is rather detached for the other children who are outside of this group of girls...(and)...does not like the boisterous children in the class and avoids them at all times. She also does not like the boys in her class. There are a few quieter boys, maybe two or three, with whom she will speak but this is only rarely”*. Therefore child E is partly socially included in her class within her own chosen circle of friends. When she has a problem with her friends she will *“shut down”*.

Child E herself feels included in the academic life of her class and enjoys learning – she likes *“most of the things that occur at school.”* She feels that she is *“getting on better now with her learning and is pleased with the progress”* she has made. She does feel though it is difficult for her to complete some of her academic work as she is distracted by classroom displays. The *“posters on display”* are *“too much”* to handle and she does not *“like their position”* and this makes her unable to be included in the academic work of her class as she is so distracted and uncomfortable. Socially she *“has lots of friends”* and in agreement with her teacher listed several girls in her class. She mentioned how she is *“able to get on well with”* her peers.

Are the emotional and behavioural needs of the pupils with ASD being met in the classroom? In what ways are these needs being met?

The teacher believes that the school are meeting child E’s needs through good adult relationships, small group work and SALT. The use of SALT specialist staff has helped child E. The school works with a SALT representative to help child E to manage her emotions. This has involved ‘Lego’ therapy and opportunities to work in a team. She has completed a project entitled ‘All About (child’s name)’ with another child. In this project Child E provided details about herself to create a booklet. This work was considered a success as she enjoyed completing it and managed to work alongside the other child and discuss her emotions. Therefore the SALT representative and the class teacher have both supported the emotional and behavioural needs of this pupil. The teacher only used the general approach of repeating instructions to her 5% of the time during the observed lessons. 95% of the time therefore no other approach was used to try to meet her needs. In general child E’s behaviour at school is excellent was seen in the observed lessons where 100% of the time child E did not exhibit any distressing behaviour. The teacher says the observed lessons were typical of the emotions and behaviours of child E in the classroom. When child E has a problem *“she will shut down”*. This is the only tactic she uses with which to regulate her emotions. This is what the school were working supporting in the SALT sessions. The teacher has not seen any other responses to an emotional problem.

Child E herself feels included in school but feels her needs are only partly being met. She could not think of anything else the school could do to help her to manage her emotions and behaviour better but likes the use of small group work and having good adult relationships. Even so child E still has difficulty in managing her emotions at the start of the school day particularly if she is late for school. At this time she will cry. This behaviour was not witnessed during the observations undertaken for this study,

Figure 29: Child E case study results (Year 4 - Literacy/Music and Sex and Relationship Education observed)			
Dimension	Data		
Location of interactions between adults and pupil	In classroom = 100% (60/60)		
Pupil context	With teacher with the whole class = 97% (58/60) With peers 1:1 = 3% (2/60)		
Type of interaction	No interaction = 97% (58/60) Responding = 5% (3/60)		
Adults supporting the pupil	Shared pupil support assistant		
Inclusion in class activities	Observations		
	Extra support observed	Specific	None = 95% (57/60) Repeat instructions = 5% (3/60)
		Middling	
		General	
	Teacher opinion		
	Academic inclusion	Enjoys learning Interacts with adults Interacts with peers Want to please	✓ ✓ ✓ ✓
	Social inclusion	Has at least one friend Attitude to peers Reactions to problems	✓ Calm/quiet Withdraws
	Pupil opinion		
	Academic inclusion	Feels included Enjoys learning Has difficulty learning/distracted Is able to complete work set	✓ ✓ Class displays ✓
	Social inclusion	Has at least one friend Would like more social interactions Prefers adults or children	✓ ✓ Either
Extent and ways in which needs are being met	Approaches observed	None = 95% (57/60) Repeat instructions = 5% (3/60)	
	Level of interest in lesson observed	Good level of interest = 33% (20/60) Intense involvement = 30% (18/60) Some apparent interest = 25% (15/60) Notices but ignores = 5% (3/60) A hint of interest = 3% (2/60) Show no interest = 3% (2/60)	
	Behaviour of pupil	None = 100% (60/60)	
	Teacher opinion		
	Are pupil's needs met?	✓	
	Ways needs are met	Through good adult relationships/SALT/Small group work	
	Use of specialist staff?	✓	
	Are pupils well behaved?	✓	
	Pupil opinion		
	Are pupil's needs met?	½	
	Do adults support the pupil?	✓	
	Ways needs are met	Through good adult relationships/Small group work	
	Use of specialist staff?	X	
	Are pupils well behaved?	✓	
	Times when managing emotions is difficult	Being late for school Start of the school day	
	Suggestion of any changes?	X	

4.4.2.6 - Child F (figure 30)

Level of interaction between the adults and the pupils with ASD during lesson time

Child F is a boy in year 4. During the observations this pupil was in the classroom for half the time (50%) and outside for 50%, however he was with the class teacher in a whole class setting for 85% of the time (N.B. sometimes the class teacher was outside with the whole class). He was the only child in this study who spent a portion of the time observed, 15%, 1:1 with the class teacher. For most of the time the pupil was not interacting at all (87%). However when interviewed the teacher stated that the pupil *“now asks for help”* although this was not seen during the observations. Child F discussed how the adults help him *“to learn in school and...teach him new things”* but not that this takes place outside of a whole class setting.

During the observations 87% of the time there was no interaction observed between child F and the adults. As with the other pupils who were observed the only interaction was fleeting at 13% when the teacher specially asked the pupil in a calm manner to repeat the instructions given to the class. There were no other interactions observed with adults including with the class teaching assistant.

How adults are working in partnership related to the pupils with ASD

Child F believes that the adults work to *“help [him] to learn at school”*. They *“teach...new things...along with the other children...and ...(he) has learnt a lot.”* He stated that *“usually”* he is with his class teacher all day but the teaching assistant help him *“to learn”* and when the class teacher is away the teaching assistant *“takes the class...all day.”*

The class teacher described how *she “mainly...works with the TA in class. The TA is there to support all the children in the class”* however the teacher often directs her to supporting this pupil. The TA *“talks things over with him and she makes sure he has the correct things available to him for the lesson”*. There is *“a PSA who works with another child in school as a 1:1 and she takes [child F] sometimes to work with another ASD child.”* The teacher noted that *“sometimes (child F) joins the other pupil’s O.T. (Occupational Therapy) sessions”*.

An example when collaboration has worked well is with the TA in class. The TA will *“talk to [child F] about the changes which will occur in the school day and how he can manage these. She always speaks to him when it will be wet play as this change in routine upsets him terribly.”* The teacher explained that he likes playtime and the freedom to run around. He cannot run around inside during wet play. Child F has a selection of games from home which he can use when it is wet play. This has helped a great deal and makes him feel less anxious. The teacher also asks the TA *“to show [child F] the weather online if rain is expected as he can see the weather symbol and it prepares him for wet play.”* The teacher could not think of a time when collaboration has not worked as the child is flexible and reasonable. It is sometimes hard to get him to come into class however this is being managed well through discussion with him.

Are the pupils with ASD academically and socially included in class activities?

Child F’s teacher believed that the pupil with ASD in her class is being included academically and socially in his class. The teacher believes that the pupil enjoys learning and will use the adult available to support him in his learning as shown by *“his willingness to approach the staff”*. She notes that child F *“is keen to learn and has made good progress this year”*. When completing academic work child F is *“calm and withdrawn”* however there are sometimes when the teacher finds it very difficult to include child F as when *“he does not like to complete his work at school and rather than be aggressive he uses work avoidance tactics. When he knows that a lesson he does not like is next he stands outside the classroom and refuses to come inside.”* This obviously makes child F different to his peers and during these times he is not part of the class’s academic work. Although socially child F does have *“one or two”* friends in his class, his teacher believes that he only *“follows along...(and)...does not interact with others”*. She has noticed that although he *“occasionally interacts with his peers...he generally just gets on with his work alone.”* Child F has been observed by the teacher to choose to voluntarily interact more with his peers when they are *“on the computers or playing football”* which are interests of his. Although the teacher perceives child F as *“fairly anxious”* she believes he *“is managing better now (and)...has widened his friendship group.”*

Child F's own opinion concerning his academic inclusion concurs in some aspects with his teacher's. He feels that he is able to approach the adults in class to help him to complete his work like the other children but feels that the work set has only let him progress "a little bit". He "spends most of his time in the classroom with the other children" but "sometimes he does like to be taken out of the room to complete his work." Child F does have difficulties in the classroom sometimes and he finds "it difficult to think and concentrate in the classroom as the other children become too loud." When the classroom becomes very loud the noise distracts him and makes completing his work more difficult. In this situation he prefers to work in "a quiet place away from the class" as he finds this easier. Therefore there are often times when child F is not included in the general classroom learning. Child F agrees that "the adults help...(him)...to learn in school...(and)...teach him new things and help him to learn along with the other children in his class". Socially child F mentions friends he has in his class however he "does not like other children shouting at him". This distresses him and he feels "the noise is horrible" and he feels "upset" when this occurs. He feels that he gets on well with his friends however not so well with other people. Child F could name three friends he has however said he "would like to get along with others better" and increase the number of friends he has. Child F prefers to work with adults rather than children.

Are the emotional and behavioural needs of the pupils with ASD being met in the classroom? In what ways are these needs being met?

Child F's teacher believes that the observations obtained were typical of child F's behavioural and emotional needs in school. "(Child F) is alert in class and follows along however he does not interact with others." The teacher manages these needs through good adult relationships, small group/paired group work and SENCO assistance and believes that the school are meeting the needs of this pupil "quite well". Through the observations undertaken it was possible to see the teacher using only general approaches such as calmly repeating the instructions to child F during the sessions 13% of the time. The rest of the time, 87%, child F received no further support.

The teacher feels that the school are managing the emotional and behavioural needs of this pupil quite well through good adult relationships as "all of the staff know

him and are familiar with his needs...(resulting)... in the staff all knowing how best to manage him.” This is working as the teacher can see a positive difference in his behaviour. The teacher, TA and the SENCO are the main staff with whom child F is connected in this manner. However a 1:1 who works with another pupil in school is sometimes encouraged to take child F as well for small group work to work on dealing with emotional conflict. *“(Child F) is now managing his emotions when he does not score a goal.”* Child F usually manages his emotions by *“withdrawing himself from the situation and others. He will go off somewhere to sit alone and will then refuse to come back to the class and carry on with his school day.”* This is being worked on through small group sessions. The teacher feels that child F’s behaviour in the classroom – the not interacting – is only *“because he is anxious to do the right thing”*. She feels that child F does not want to *“do the wrong thing and be told off”*. The teacher thinks that child F is *“a typical ASD child”* and the school are working to support him in this way. During the observations some of these avoidance tactics – withdrawing/moving away were witnessed. Child F was seen to be crying for 13% of the time and 22% flapping or moving away. 65% of the time there was no observable behavioural difficulties occurring.

Child F thinks that some of his emotional and behavioural needs are being met in school. He was unable to think of any things which need to be changed in school which would help him to achieve more easily. Child F thinks that maybe he would like to have more “sporty things” available for playtime and then he could “play alongside the other children better” which highlights the emotional support he requires when interacting with his peers.

Child F only likes coming to school *“sometimes”*. He described how at the end of the weekend he *“feels bored and tired”* when he thinks he has to come back to school again the next day. As the week progresses these feelings get better but they then repeat themselves at the end of the next weekend. Child F feels that he behaves well in class however is only sometimes happy there. Child F believes that he is still settling in to school life and therefore feels there is room for more support with his emotional and behavioural needs.

Figure 30: Child F case study results (Year 4 – Physical Education and Music observed)				
Dimension	Data			
Location of interactions between adults and pupil	In classroom = 50% (30/60) Outside = 50% (30/60)			
Pupil context	With the whole class = 85% (51/60) With the teacher 1:1 – 15% (9/60)			
Type of interaction	None = 87% (52/60) Responding = 10% (36/60) Initiating and responding = 3% (2/60)			
Adults supporting the pupil	Class teaching assistant			
Inclusion in class activities	Observations			
	Extra support observed	Specific	None = 87% (52/60)	
		Middling		
		General		Calm repetition = 13% (8/60)
	Teacher opinion			
	Academic inclusion	Enjoys learning Interacts with adults Interacts with peers Want to please	✓ ✓ X X	
	Social inclusion	Has at least one friend Attitude to peers Reactions to problems	✓ ✓ Withdraws	
	Pupil opinion			
	Academic inclusion	Feels included Enjoys learning Has difficulty learning/distracted Is able to complete work set	✓ ✓ ✓ ✓	
	Social inclusion	Has at least one friend Would like more social interactions Prefers adults or children	✓ ✓ Adults	
	Extent and ways in which needs are being met	Approaches observed	None = 87% (52/60) Calm repetition = 13% (8/60)	
		Level of interest in lesson observed	Some apparent interest = 35% (21/60) Good level of interest = 32% (19/60) Intense involvement = 18% (11/60) Notices but ignores = 8% (5/60) No interest = 3% (2/60) A hint of interest = 3% (2/60)	
Behaviour of pupil		None = 65% (39/60) Flapping/jumping/moving away = 22% (13/60) Crying = 13% (8/60)		
Teacher opinion				
Are pupil's needs met?		✓		
Ways needs are met		Through good adult relationships Small group/paired work SENCO assistance		
Use of specialist staff?		✓		
Are pupils well behaved?		✓		
	Pupil opinion			
	Are pupil's needs met?	½		
	Do adults support the pupil?	✓		
	Ways needs are met	Through good adult relationships		
	Use of specialist staff?	X		
	Are pupils well behaved?	✓		
	Times when managing emotions is difficult	X		
	Suggestion of any changes?	X		

4.4.3 – Overall grouped case study results

Level of interaction between the adults and the pupils with ASD during lesson time

The results from these observations are shown here in tables 33, 34 and 35.

Table 33: Location of interactions between adults and pupils with ASD

Location	In the classroom	In another room outside and away from the main classroom	In a corridor outside the classroom	Outside the school building/ Moving around the school	In an adjoining room to the classroom
Pupils experiencing the least difficulty	75%	0%	0%	25%	0%
Pupils experiencing the mid-range amount of difficulty	98%	0%	0.9%	0.9%	0%
Pupils experiencing the most difficulty	100%	0%	0%	0%	0%
Total Frequency	91%	0%	3%	8.6%	0%

Overall most of the pupils do remain in their classrooms during the school day (91%). Although it would appear that the pupils with the least emotional and behavioural difficulties were the least in their classrooms at 75%, this must be considered with the results in table 34. Table 34 shows that 91% of the time the pupils with the lowest level of social, emotional and behavioural difficulties were with their teachers in a whole class setting. This would clarify the result in table 33 showing that the pupils with ASD were with their class outside their classroom with the teacher rather than being excluded on their own.

Overall table 34 shows that most of the pupils with ASD are with their teacher in a whole class setting (82% of the time).

When the results are broken down in table 34 they show that it is the pupils with the mid-levels of social, emotional and behavioural difficulties which work with the teaching assistants 1:1 the most, (16%), and in a whole class setting the least, (65%).

Table 34: Pupil context

Pupil context	With a peer 1:1	With peers in a group	With peers in whole class	With a teacher 1:1	With teacher in group	With a teacher in whole class	With a teaching assistant 1:1	With teaching assistant in group	With another adult, eg. specialist staff – SALT, Ed. Psych.
Pupils experiencing the least difficulty	2%	0%	0%	8%	0%	91%	0%	0%	0%
Pupils experiencing the mid-range amount of difficulty	4%	3%	7%	4%	0%	65%	16%	0%	0%
Pupils experiencing the most difficulty	5%	0%	1%	3%	0%	91%	0%	0%	0%
Total Frequency	4%	1%	3%	5%	0%	82%	5%	0%	0%

Table 34 also highlights the low level use of teaching assistants in group work. There were not any examples of small group work with a teaching assistant leading the learning despite the use of small group work being documented as an effective way of teaching pupils with ASD (chapter 4). Only 5% of the time the pupils were observed were teaching assistants involved in any interactions with the pupils. This seems to be contrary to the idea of teaching assistants who are employed to support the pupils. Indeed most of these pupils have a 1:1 teaching assistant supplied solely to help them access the curriculum however it appears that their roles are somewhat passive and generally in an observational role towards the teacher.

It is interesting to also note that the level of interaction with a specialised member of staff, eg. SALT or an Educational Psychologist was also non-existent during the observations. Although this interaction may of course take place outside the hours in which these pupils were observed during this study, it is noticeable that none of the pupils were engaged in any work with these specialised staff members or were completing follow up work set from any sessions led by them. This implies that their input is limited. This finding was also discovered during the teachers' interviews in part two and, as also found in part two, is an area in which interactions could be developed.

Table 35 explores the nature of these interactions between the adults and the pupils.

Table 35: Types of interactions

Type of interaction	Pupil initiating	Pupil initiating and responding	Pupil responding only	None
Pupils experiencing the least difficulty	0%	2%	7%	92%
Pupils experiencing the mid-range amount of difficulty	1%	20%	18%	61%
Pupils experiencing the most difficulty	2%	9%	6%	83%
Total Frequency	1%	10%	10%	78%

As shown in table 35 the observations showed a lack of interaction between the adults and the pupil (overall 78% of the time). As shown in table 39, table 40 also highlights the pupils with the mid-range of anxiety had the most interactions with adults. 20% of those in this category were observed to both initiate and respond to an adult during the time they were observed. Perhaps this can be explained by this group having the most context with a teaching assistant 1:1 and therefore had the most opportunities to speak with and interact with an adult. This highlights the positive affect a teaching assistant can have in a class when working with pupils with ASD. As communication can be a major difficulty for pupils with ASD (chapter 3) it is important to have the opportunity of communicating provided. As shown here when this provision is in place the level of interactions increases.

Therefore overall the most frequent interaction and school experience for pupils with ASD in this study by far is in a whole class setting with the class teacher.

How adults are working in partnership related to the pupils with ASD

The interactions between the adults – teachers and teaching assistants, were explored through the interviews undertaken as part of part three of this study. All of

the pupils had additional support to the class teacher. Every class visited had a either a pupil support assistant or a teaching assistant who was used to support the classes' learning. However a teaching assistant is employed for the benefit of all pupils and not solely for the pupil with ASD. Only a pupil support assistant is employed to support an individual pupil. Therefore his/her time is divided between around thirty pupils and is not focussed entirely on the pupil with ASD's needs.

Table 36 shows the level of support each pupil ASD received. The percentages generated show the ways in which the pupil with ASD was being supported during the observed lessons. For example the pupils with the least social, emotional and behavioural difficulties had a teaching assistant with the whole class for the entire length of the observation (100%) however an assistant was working with a group of pupils including the pupil with ASD for only 50% of the time.

Table 36: Adults supporting the pupil with ASD

Level of pupil emotional and behavioural difficulty	Pupil Support Assistant (1:1)	Shared Pupil Support Assistant (group)	Teaching Assistant (within whole class)
Pupils experiencing the least difficulty	0%	50%	100%
Pupils experiencing the mid-range amount of difficulty	0%	100%	50%
Pupils experiencing the most difficulty	0%	50%	100%
Total Frequency	0%	67%	83%

As shown in table 36, none of the pupils with ASD had a pupil support assistant solely for themselves. There were no interactions therefore between the teacher and a pupil support assistant (1:1), as none of the pupils had a 1:1, no one is employed to individually support their needs. At best some of the pupils had the support of a pupil support assistant who worked with other pupils as well, so this interaction between the teacher and a shared pupil support assistant does exist. These pupil

support assistants, who work with 67% of the pupils investigated, do not solely work pupils with ASD. As explained in chapter 3 as pupils with ASD can have a wide range of abilities and difficulties even this sharing would be difficult to manage. However these TA's are working with pupils with a wide variety of special needs. Some of the pupils had speech and language needs, others ADHD, behavioural challenges and other learning difficulties and were from different year groups. Therefore the support offered by these shared pupil support assistants are not tailored solely towards the experiences of the pupil with ASD. These pupils have to wait for support during focus sessions as the adult will be supporting other pupils and when completing activities, these activities will not be tailored solely to their needs.

All of the teachers discussed which factors affect how well the pupils with ASD are supported through their interactions. The interactions between the teachers and other staff were therefore explored. All of the teachers found that they needed time in which to speak with the support staff. This was mentioned by all teachers as it allowed the teachers the opportunity to inform the support staff of any new issues which may have arisen regarding the pupil which may in turn affect their school experience. This interaction takes place before school when the support staff arrive. Typically there is only a short amount of time for this take place as support staff are not paid to start school generally much before the pupils arrive. The other way in which the quality of interactions between the teacher and support staff is improved which was mentioned by all staff as well length of service.

Each teacher explained that the longer a member of support staff worked at the school, the better the interactions and quality of provision were. All the teachers described how the longer a member of staff worked at the school, the better the teacher and pupil knew them and vice versa. By knowing the staff very well a rapport is built between the teacher and support staff and between the pupil and support staff. All the teachers explained that this was a main factor in explaining when interactions and the provision which follows work well. The adults create an understanding between each other and the support staff know the strengths and difficulties of the pupil and therefore are more able to work better together. One third (2/6) of the respondents also mentioned the role of specialist staff in interactions between school based staff and the training of support staff. One third of teachers felt that interactions were improved by the presence of specialist staff provision. If a

SALT, for example, had left work to be completed or had started sessions which the support staff could continue, the teachers felt that this improved interactions and interventions. The teachers felt it gave the support staff something concrete which they could develop and feed back to the teacher. It gave the support staff a clear focus and direction. The same teachers found that the training of support staff was also an important factor in the quality of interactions and provision as the support staff would be more confident in their work.

During the interviews in part three of this study, the teachers were also asked about the times and situations when interactions and provision had not worked so well. One third of the teachers' interviews (2/6) mentioned both the difficulty with new staff and the TA's having too many pupils in her care. As mentioned above teachers believe that longer service creates better working relationships. The adults do not know each other or their working styles as well and the TA's cannot contribute so knowledgably about the pupil concerned. In addition when the TA's have several pupils in their group, they begin to become stressed as they are spread too thinly across pupils with varying needs. This perhaps could be foreseen in table 4 which showed that none of the pupils investigated had their own TA who could focus solely on their needs. Other reasons highlighted were a difference of opinion regarding what is best for the pupil concerned. Sometimes interactions are less successful because the teacher and support staff feel that different tactics should be used. One teacher mentioned how she feels the support staff just give the pupil what she wants and are too kind to her. She felt that this caused disagreement between themselves as she felt the pupil needed to experience things which may distress her as a preparation for what she will meet in her later life. The teacher felt that the support staff do not "*see the full picture*". She also believed that they do not realise that in school they are trying to prepare the pupil for life outside school where invariably the pupil will encounter things she does not like. By shielding her from these things in school the pupil is never being challenged to find ways in which to deal with her discomfort. However well-intentioned the support staff are in this regard, the teacher believed that they are doing her a disservice. This difference in opinion makes interactions difficult and creates a fractured approach to the pupil's provision. Only one teacher felt that there were not any difficulties in interactions mainly because the pupil in question is very flexible and reasonable and therefore required little support.

Are the pupils with ASD academically and socially included in class activities?

Data was collected focusing on how included the pupils are academically and socially in their class. This data was generated from three sources – staff interviews, pupil interviews and observations. Table 43 firstly illustrates the data generated from the observations.

Table 37: Observable use of inclusion strategies in class activities (measured in the percentage of time a strategy was employed)

	Specific	Middling	General
Pupils experiencing the least difficulty	0%	0%	2.6%
Pupils experiencing the mid-range amount of difficulty	0%	0%	19.0%
Pupils experiencing the most difficulty	19.0%	0%	0.86%
Total Frequency	6%	0%	7.5%

Table 37 shows the very small amount of additional support is offered to the pupils. In the 6 case studies only 2 provided any academic support. Overall in the 6 case studies only 6% of the time did any pupil observed receive any specific additional academic support which is considered to be different to anything which may be generally offered to their peers. More common was the general support offered at 7.5% of the time. This is again a very small percentage indicating that only in a small amount of time was a more general approach used with the pupil with ASD. This general approach to the work was academic support which is common in primary schools as explained in chapter 3. Therefore we can conclude that the pupils with ASD are being included in the academic curriculum in line with their peers without ASD. Pupils with ASD cannot feel excluded or different in the lessons observed as in only 6% of the time are they experiencing a different academic experience than their peers without ASD.

Table 38 shows the data generated from the staff interviews on the subject of academic and social inclusion of pupils with ASD in the classroom. The scores for the pupils with high social, emotional and behavioural difficulties, middle and low have been displayed as have the total scores including all participants in the case studies. In each area the percentage of pupils to whom each statement was confirmed is shown. For example 100% or all of the pupils (2/2) with the least amount of social, emotional and behavioural difficulties are reported by their teachers to be interacting appropriately with adults whereas overall, including all group of social, emotional and behaviour difficulties, only 50% (3/6) are reported to do so.

Table 38: Teacher reported academic and social inclusion of pupils with ASD

	Academic		Social	
Pupils experiencing the least difficulty	Enjoys learning Interacts with adults appropriately Interacts with peers appropriately Wants to please	100% (2/2) 100% (2/2) 50% (1/2) 50% (1/2)	Has at least one friend Attitude with peers – calm/withdrawn/quiet Response when a problem occurs – withdraws	100% (2/2) 100% (2/2) 100% (2/2)
Pupils experiencing the mid-range amount of difficulty	Enjoys learning Interacts with adults appropriately Interacts with peers appropriately Wants to please	100% (2/2) 50% (1/2) 0% (0/2) 0% (0/2)	Has at least one friend Attitude with peers – calm/withdrawn/quiet Response when a problem occurs – violent	100% (2/2) 100% (2/2) 100% (2/2)
Pupils experiencing the most difficulty	Enjoys learning Interacts with adults appropriately Interacts with peers appropriately Wants to please	100% (2/2) 0% (0/2) 50% (1/2) 0% (0/2)	Has at least one friend Attitude with peers – calm/withdrawn/quiet Response when a problem occurs – cries	100% (2/2) 100% (2/2) 100% (2/2)
Total Frequency	Enjoys learning Interacts with adults appropriately Interacts with peers appropriately Wants to please	100% (6/6) 50% (3/6) 33% (2/6) 17% (1/6)	Has at least one friend Attitude with peers – calm/withdrawn/quiet Response when a problem occurs - calm/withdrawn/quiet - violent - cries	100% (6/6) 100% (6/6) 33% (2/6) 33% (2/6) 33% (2/6)

Table 38 summarises the teachers' opinions regarding the academic and social inclusion of pupils with ASD in their classrooms. Even though the division by level of emotional and behavioural difficulties was not specified in the research questions, this has been included here in addition to the total amounts to add greater perspective to the findings.

All of the teachers believe that the pupils with ASD in their classes are being included in a suitable way academically. When asked how they knew this all of the teachers note that this results in the pupils being happy and enjoying learning in school which is something which could not happen if they were not included in the learning. However not all the pupils interact with the adults and their peers appropriately or want to please the staff. When looked at in more detail it is the pupils with the most emotional and behavioural difficulties (highest scoring and middle scoring) who are not perceived as wanting to do well in the area of pleasing their teacher and therefore receiving praise. Although this data shows that teachers' believe the pupils with ASD are included academically their anxiety makes them unable to realise what is expected at school academically and please their teachers. Again as social, emotional and behavioural difficulty levels increase so does the ability to interact with adults in the classroom highlighting how these pupils do not feel secure enough to interact by asking questions, commenting and so on during lessons with the adults.

The social inclusion column also provides an insight into the teachers' perspective of the social inclusion of pupils with ASD in their class. All of the teachers report that the pupil with ASD in their class has at least one friend explaining that pupils with ASD are able to make and maintain at least a limited number of friendships and therefore enjoy some social inclusion, Each of the pupils are reported as being very quiet in these relationships and often choosing only other quiet children of the same gender. It is interesting to note that within the different levels of social, emotional and behavioural difficulties the pupils' reactions to problems in their friendships differ. The pupils with the least social, emotional and behavioural difficulties simply remove themselves from the friend and withdraw somewhere else to be alone. These pupils feel that there is a problem and we can surmise are trying to follow school rules and leave the situation as they are unable to verbalise the issue however are not being physical with others. Those pupils who

have middle levels of anxiety are reported as being violent. The teachers spoke of lashing out at other children, hitting and kicking when they do not like what has occurred. The pupils who scored very highly with anxiety are not reported to be violent towards other but only able to cry. Although this does show that these pupils are involved with other children as a situation has arisen between them and others, they are unable to verbalise the problem. Their only reaction is to cry which shows their frustration.

The pupils were also interviewed regarding their opinions regarding their academic and social inclusion at school. Table 39 illustrates the pupils' responses.

Table 39: Pupil reported academic and social inclusion at school

	Academic		Social	
Pupils experiencing the least difficulty	Feels included Enjoys learning Has difficulty learning/class distractions Is able to complete the work set	100% (2/2) 100% (2/2) 100% (2/2) 100% (2/2)	Has at least one friend Would like more social interactions Prefers adults	100% (2/2) 100% (2/2) 50% (1/2)
Pupils experiencing the mid-range amount of difficulty	Feels included Enjoys learning Has difficulty learning/class distractions Is able to complete the work set	100% (2/2) 100% (2/2) 0% (0/2) 0% (0/2)	Has at least one friend Would like more social interactions Prefers adults	100% (2/2) 50% (1/2) 100% (2/2)
Pupils experiencing the most difficulty	Feels included Enjoys learning Has difficulty learning/class distractions Is able to complete the work set	100% (2/2) 50% (1/2) 50% (1/2) 50% (1/2)	Has at least one friend Would like more social interactions Prefers adults	100% (2/2) 50% (1/2) 100% (2/2)
Total Frequency	Feels included Enjoys learning Has difficulty learning/class distractions Is able to complete the work set	100% (6/6) 83% (5/6) 50% (3/6) 50% (3/6)	Has at least one friend Would like more social interactions Prefers adults	100% (6/6) 67% (4/6) 83% (5/6)

As with the teacher responses, the pupils have been grouped into levels of social, emotional and behavioural difficulty in addition to the general totals. As shown in table 39 all of the pupils interviewed believed that they were included academically in the school (6/6 - 100%). Half of the pupils felt that the work they were set was too difficult, not too easy, and therefore they had difficulty in completing it (3/6 - 50%). This may indicate that although the teachers feel they are including the pupils with ASD academically, perhaps the challenge is set at the wrong level. When asked directly if they enjoy school most of the pupils replied that they do enjoy their learning (5/6 - 83%) which is slightly lower than the teacher perception of this which was 100% (which in this sample is only one pupil short of full agreement). Half of the pupils believe that there are distractions in the class which make them feel different and unable to complete their work. This was mostly found in the low social, emotional and behavioural difficulty category where the pupils complained of loud noises and classroom displays. These issues were not mentioned by any of the staff interviewed perhaps reflecting that the teachers have not noticed that this is a problem for these pupils.

Socially all the pupils reported that they feel included in school life. All six had at least one friend whom they could name (6/6 - 100%). Most pupils could name several children with whom they are friends. This is in agreement with table 44 where all six of the teachers believed the pupils had at least one friend and were therefore included in some social group. Some of the pupils, 4, spoke about wanting more friends (4/6 - 67%) and social situations. This implies that although they self-proclaim to enjoy social situations they feel they are lacking in this area and would like some more. Although all schools have therefore managed to include all the pupils with ASD socially this is still an area which could be developed for the majority. During the interviews the pupils spoke about their friends in a mostly positive light however when asked if they prefer to be with the adults or with the children in school nearly all of the pupils responded with the adults (5/6 - 83%). The only pupil who did not respond in this way did not pick the child option either as she could not make up her mind. Perhaps this overwhelming positive choice towards the adults is a reflection of the opinion which arose during the teacher interviews where the teacher noted that some members of staff give pupils everything they want and

therefore let them have their own way all the time. This may be why the pupils prefer the adults to children which will be explored in chapter 5 more fully.

Are the social, emotional and behavioural needs of the pupils with ASD being met in the classroom? In what ways are these needs being met?

In order to explore these questions data was generated from three sources – observations, teacher interviews and pupil interviews. Table 40 shows the ways in which the needs of the pupils were met during the observations undertaken.

Table 40: Percentage of time that approaches were observed

	Percentage of time approaches were employed	Description of approach
Pupils experiencing the least difficulty	2.6%	Repeating instructions
Pupils experiencing the mid-range amount of difficulty	19.0%	Calm voice Repeating instructions Calling name
Pupils experiencing the most difficulty	19.86%	Calm voice Sensory toy
Total Frequency	13.5%	

Table 40 shows us that for most of the time there are not any types of identified types of approaches being employed with the pupils with ASD (86.5%). During these observations the extent of the use of any type of approach or assistive technology described in chapter 2 was extremely limited. Within the approaches listed in table 44 only the sensory toy was a specific observable additional support in class approach as outlined in chapter 3. The other approaches were all general or middling observable primary approaches. This leads us to believe that many of the available supports and approaches are not being employed in contemporary classrooms.

Whether or not more support for the pupils with ASD may have been useful at the times observed will now be explored. Table 41 explores the attention and connection the observed pupils had in the lesson.

Table 41: Percentage of time observed pupil interest in lesson

	No interest	Notices but ignores	Hint of interest	Some apparent interest	Good level of interest	Intense involvement
Pupils experiencing the least difficulty	3.4%	6.0%	2.6%	30.2%	32.8%	25%
Pupils experiencing the mid-range amount of difficulty	0%	0.9%	10.3%	14.7%	13.8%	56.0%
Pupils experiencing the most difficulty	0%	1.8%	22.4%	35.3%	31.9%	17.2%
Total Frequency	1.1%	2.9%	11.2%	26.7%	27.6%	32.8%

Table 41 shows that overall for nearly one third of the time pupils were fully immersed and interested in their lesson (32.8%). When divided between groups it is the mid emotional and behavioural difficulty pupils who scored the highest at just over one half of the time being intensely involved in their lessons (56.0%). 15.2% of the time the pupils observed were not connected to their lessons.

Table 42: Percentage of time specific types of pupil behaviour was observed

	None	Crying	Rocking	Shouting/ Self-harm/ Flicking/ Echolalia/ Twirling	Perseveration (repetition of a particular response)	Other
Pupils experiencing the least difficulty	93.1% (108)	6.9% (8)	0%	0%	0%	0%
Pupils experiencing the mid-range amount of difficulty	75.0% (87)	0%	13.8% (16)	0%	1.7% (2)	9.5% (11 - laughing)
Pupils experiencing the most difficulty	100% (116)	0%	0%	0%	0%	0%
Total Frequency	89.4%	2.3%	4.6%	0%	0.6%	3.2%

Table 42 concurs with the findings reported in the teacher interviews that the pupils seem to be happy in school and indeed concurs with the pupil interviews themselves as most of the pupils (89.4%) did not exhibit any of the normal displays of anxiety (chapter 2). It is surprising that the pupils who scored the highest in emotional and behavioural difficulties on the scales exhibited the least signs of anxiety (0%).

To enhance the observations interviews were held with both the teachers and the pupils to explore the results of the observations, ask further questions regarding the ways in which the emotional and behavioural needs are being met and to provide an opportunity for the participants to mention anything they believe to be important to be included in this study.

The teacher interviews produced a range of data results which are displayed as table 43.

Table 43: Teacher responses regarding extent and ways to support pupils' needs

	Are pupils' needs being met?	Ways needs are being met	Use of specialist staff	Are the pupils well behaved?
Pupils experiencing the least difficulty	2/2 - 100%	<ul style="list-style-type: none"> • Through good adult relationships • Small group/paired work • SENCO assistance • SALT (Lego therapy) 	✓	Yes = 2/2 - 100% No = 0/2 - 0%
Pupils experiencing the mid-range amount of difficulty	2/2 - 100%	<ul style="list-style-type: none"> • Through good adult relationships • ELSA • SALT • TA attention 	✓	Yes = 2/2 - 100% No = 0/2 - 0%
Pupils experiencing the most difficulty	2/2 - 100%	<ul style="list-style-type: none"> • Through good adult relationships • Sensory toys • Emotion lessons/booklets • Worry box • SALT • Repetition 	1/2	Yes = 2/2 - 100% No = 0/2 - 0%

Table 43 shows that all the teachers interviewed believe the pupils with ASD needs are being met in school (6/6 - 100%). The common features throughout all the responses

was the mention of good relationships between the staff and the pupils. All of the teachers described how they felt the pupils' social, emotional and behavioural needs were being met partly through the trust which exists between the pupil and the staff. They spoke at length regarding how the pupils' emotions and behaviour are much more constant and manageable when the pupil feels secure in school and happy to be there. This is achieved by developing a good working relationship between the staff and the pupil. One teacher discussed how a teaching assistant left the school recently and a new person was employed. This was very difficult for the pupil with ASD and as a result the pupil turned solely to the teacher as she knew him and has so far not interacted with the new member of staff at all. The teacher felt that if he (the teacher) had also changed then the regulation of the pupil's emotions and behaviour would have undoubtedly be negatively affected. All of the teachers interviewed (100%) felt that the behaviour of the pupil with ASD in the classroom was very good.

Another common feature described by the teachers concerning how well the emotions and behaviour of pupils with ASD are managed is through the use of specialist staff. This concurs with the findings in part two where teachers sought more help from these professionals. Teachers have found the use of specialist staff very helpful. SALT (speech and language therapy) was commonly mentioned. The teachers described how it is very useful to have the SALT team work with the pupils and leave some work which a teaching assistant could then follow up on during the week ahead of the next SALT visit. ELSA (emotional literacy support assistant) was described as useful as well. This (as explained in chapter 2) is run by a teaching assistant following training from a specialist. Sensory toys provided by specialists were also described as extremely useful for some pupils.

The pupils were also interviewed on the subject of how they feel their social, emotional and behavioural needs are being met in school. Their results are shown in table 44.

Table 44: Pupils responses regarding extent and ways their needs are being met

	Are pupils' needs being met?	Do adults support the pupil?	Ways needs are being met	Use of specialist staff	Are the pupils well behaved?	Times when managing emotions are difficult	Suggest any changes?
Pupils experiencing the least difficulty	Yes = 0/2 - 0% Somewhat = 2/2 - 100% No = 0/2 - 0%	Yes = 2/2 - 100% No = 0/2 - 0%	<ul style="list-style-type: none"> Through good adult relationships Small group work 	X	Yes = 2/2 - 100% No = 0/2 - 0%	<ul style="list-style-type: none"> Changes in school routines Being late for school Start of the day 	Yes = 0/2 - 0% No = 2/2 - 100%
Pupils experiencing the mid-range amount of difficulty	Yes = 2/2 - 100% Somewhat = 0/2 - 0% No = 0/2 - 0%	Yes = 2/2 - 100% No = 0/2 - 0%	<ul style="list-style-type: none"> Through good adult relationships Small group work with a member of staff 	X	Yes = 2/2 - 100% No = 0/2 - 0%	<ul style="list-style-type: none"> Speaking in front of the class Writing Painting Assembly awards 	Yes = 1/2 - 50% No = 1/2 - 50%
Pupils experiencing the most difficulty	Yes = 1/2 - 50% Somewhat = 1/2 - 50% No = 0/2 - 0%	Yes = 2/2 - 100% No = 0/2 - 0%	<ul style="list-style-type: none"> Through good adult relationships Removal from the classroom Staff explanations Small group work 	X	Yes = 2/2 - 100% No = 0/2 - 0%	<ul style="list-style-type: none"> Starting of the day When work too hard Changes in school day 	Yes = 0/2 - 0% No = 2/2 - 100%
Total Frequency	Yes = 3/6 - 50% Somewhat = 3/6 - 50% No = 0/0/ - 0%	Yes = 6/6 - 100% No = 0/6 - 0%	<ul style="list-style-type: none"> Through good adult relationships Small group work with member of staff Removal from the classroom Staff explanations 	X	Yes = 6/6 - 100% No = 0/6 - 0%	<ul style="list-style-type: none"> Changes to school routines Being late Start of the day Speaking in front of the class Writing and painting 	Yes = 1/6 - 16.7% No = 5/6 - 83.3%

Table 44 shows that all the pupils believe that they received some support for their social, emotional and behavioural needs at school. Half of the pupils (50%) believe that they are happy with the ways in which their needs are being met whereas the other half are somewhat happy. None of the pupils answered 'no'. Therefore, although a little lower than the teachers' scores of 100%, both parties believe that support is in place to meet the pupils' social, emotional and behavioural needs. This is especially true when we consider the next column in table 44 where all the pupils responded that there are adults in school who support them. Therefore some support is there but is not always effective.

In agreement with table 43 (the teacher responses), table 44 (about pupil responses) pupils with all areas of social, emotional and behavioural difficulties mentioned their relationships with adults. Just as with the teacher results, all the pupils felt that they have a good relationship with the staff and appreciate the ways they attempt to meet their needs. The pupils mentioned how they can talk with the staff they know and they answer their questions and help them to feel more secure. Interestingly none of the ways in which their needs are being met connected with the use of specialist staff unlike the teacher responses in table 43. Even the small group work mentioned was with a teaching assistant finishing off work or with the SENCO on staff following a scheme of work. Maybe the specialist staff visit the school so infrequently the pupils forget them or maybe the work they leave has no noticeable effect from the pupils' perspective. In agreement with the teachers in table 42, all of the pupils felt that their behaviour in the classroom was very good.

Also included in table 44 are the reasons when a pupil feels it is difficult to manage their emotions. All of the pupils described how they felt anxious during these times. The most common time was at the start of the day when the pupils described feeling overwhelmed. Changes in the school day also results in the feeling of anxiousness. Although the time of difficulties were not the main focus of this study they are an interesting enhancement. Finally none of the pupils could think of anything the schools could do differently to help them to manage their emotions and behaviour except one pupil who felt if he could bring in soft toys and 'fidget spinners' from home he would be less anxious. These could be described as sensory toys which are generally recommended and/or provided by specialist staff.

In summary overall the case studies highlighted the physical inclusion of pupils in the classroom for the majority of their time however their interactions with adults was very low. Generally the observed pupils with ASD were with their class teacher as part of the class with very minimal interactions. The main adults available to assist the pupils with ASD in this study were observed to be TA's who worked with the whole class rather than 1:1's who were assigned to an individual pupil or a group of pupils only. Indeed during this study it was noted that there were not any individual PSA's (1:1) assigned to any of the observed pupils with ASD. When considering resources, strategies, equipment etc employed to support pupils with ASD, this study found that the use of such things was very minimal. Despite this lack of observable support all pupils and teachers agreed that the pupils with ASD are socially and academically included in their classes. Indeed during observations the pupils were found to be mostly interested in their learning. Most of the approaches used in the lessons observed were not ASD or even SEN specific but rather approaches which could be used with the whole class such as a calm voice or repeating instructions. There was very little observable anxious pupil behaviour observed. All of the teachers believed that the pupils' emotional needs are being met and that as a result the pupils are well behaved. The pupils themselves however do not completely concur with this statement with only 50% claiming that their needs are being met. However all the pupils agree with their teachers that they are well behaved at school.

Chapter 5: Discussions and Conclusions

5.1. - Introduction

For each of the three parts of this study there will be a summary of the key findings of the level of social, emotional and behavioural functioning of the pupils, providing a succinct answer to each of the research questions. Interwoven with these findings will be their relationship and significance to existing literature. Comparing these findings with those of previous studies will identify in which ways this thesis can contribute to the building up of knowledge with regards the support of primary aged pupils with ASD.

Following the conclusions from each part this chapter continues to discuss the strengths and limitations of each part in turn, including the difficulties which were encountered at each point in addition to why the different parts were successful. The final sections of this chapter concern the implications this study has for further research and study and to practice and policy. Finally the originality and contribution to knowledge will be summarised as well as a succinct explanation of the contribution this study has made to my own personal development.

Part One – Summary and relation to research

Part one of this study was concerned with the levels of difficulty the pupils were experiencing in their schools and using established surveys generated quantitative data. As described in chapter 4, the main results were:

- Main areas of difficulty across both scales – high emotional levels
- Differences between participant perspectives – higher parental scores

Relationships between the three perspectives – interesting correlations

Firstly this thesis will now discuss the high levels of difficulty the pupils were reported to be experiencing by the different respondents, then the reasons why higher parental scores were recorded will be investigated followed by an examination of the relationships between the three respondents. In this way a clear discussion and conclusion can be drawn concerning the levels of difficulty pupils are experiencing in the classroom.

5.2.1. – Introduction - Levels of difficulty concerning social, emotional and behavioural functioning from pupil, teacher and parent perspectives

The levels of social, emotional and behavioural functioning of pupils in this study were measured through the use of the SDQ and the RCADS. It was from these measures that the results were generated. Although the SDQ is very well known and widespread in its usage (Woerner et al., 2004) it is difficult to compare the findings of this study with many others because most studies using the SDQ have taken place with older children, for example Simonoff et al. (2013). Simonoff et al. (2013) were concerned explicitly with exploring psychiatric problems in adolescents with ASD. Although this study's research was based on adolescents, not children, it still found that those with ASD had some specific SDQ symptoms which is also true here. This study is therefore using the SDQ in a new way with a different age of children. The lack of widespread SDQ usage with younger children may be because the pupil version of the SDQ is only available for older children (adolescents). This was the reason why this study did not use the SDQ child version but instead generated data from parents and teachers regarding primary aged pupils.

The use of the RCADS has been more limited in research than the use of the SDQ. There are very few examples of research where the RCADS has been used with primary pupils with ASD which will be discussed later in this chapter so the way in which this study was undertaken with three respondents is also a new area which has been covered. There has been however studies concerning the use of the RCADS with some older pupils with ASD. Sterling et al. (2014) were interested in the use of the RCADS with pupils with ASD. This research supported the use of the RCADS with pupils with ASD however it was used with older children (11-15 years) and not with the age group covered in this study therefore this the use of the RCADS with primary children with ASD from three perspectives is a new area of research.

This thesis will now discuss the key findings in relation to existing research within the three main findings from the quantitative data explained in chapter 4 – panic/depression/separation difficulties, social phobia and hyperactivity and emotional problems. We will now discuss each finding in turn.

Panic/depression/separation difficulties -

The pupil, teacher and parent RCADS results all highlighted the same three main areas of difficulty – panic disorder, major depression and separation anxiety. These three areas had the highest levels of difficulty of all the seven sub-areas reported. Although these areas were the highest scoring for all participants, the pupil mean score was still within the ‘no difficulty’ range. However as these three areas were identified by all the participants it would imply that these are the areas in which the pupils do have the most difficulty.

The above findings are in agreement with previously completed research regarding the use of the RCADS with children with ASD. The inclusion of panic disorder (recurrent unexpected panic attacks, which are sudden periods of intense fear – NIMH, 2018) as a major area of difficulty is unsurprising as other studies about the difficulties children with ASD experience have also found this. Van Steensel et al., (2012), discovered that parents of children with ASD group also reported their children to have higher panic disorder scores. Oswald et al., (2016), also found that a group of children with ASD reported high levels of separation anxiety as well as high levels of panic disorder. Although Oswald et al. (2016)’s research was concerned with slightly older children than this study, the conclusion that the separation anxiety was indicating atypical development of independence may also be relevant here. Indeed Rodgers et al. (2016) study using the new RCADS scale developed for children with ASD (ASC-ASD) also concurred that separation anxiety was a concern for parents of children with ASD and could be described as ‘a real phenomenon of ASD’ (p. 1212). Major depression featured as the highest level of difficulty from both the teachers’ and parents’ point of view and the second highest according to the pupils themselves. Fung et al. (2015) states that depression is among the most common issues surrounding individuals with ASD. Perhaps this sample of pupils with ASD scored particularly highly in the major depression sub area as all those who were included were able to communicate with the researcher and could answer the questions independently. It has been found that individuals with ASD who are higher functioning and can communicate with others are more able to identify cognitive symptoms of depression and is therefore seen in individuals with higher intellectual abilities and less severe socio-communicative impairments (Gotham, Unruh, and Lord, 2014). These results are interesting as, although these

areas of difficulty have been proven to be experienced by children with ASD, there has not been any other research in which the views of pupils, teachers and parents have been investigated and compared with each other. Therefore there is not any available research upon which to compare the findings here. In this area this study is original as it allows SDQ data based on primary school pupils from different perspectives, teacher and parent, to be explored and displayed in each subarea separately and contribute to knowledge in this way.

As described in chapter 2, Rodgers et al. (2016) adapted the RCADS for use especially with children with ASD. Although this new scale (ASC – ASD) provides anxiety levels in new areas, uncertainty, sensory hyperactivities and phobias, creating the areas of Performance Anxiety, Uncertainty, Anxious Arousal, and Separation Anxiety, it found that children of a higher ability appeared to have a higher level of anxiety. This is difficult to compare with this study as ability was not measured during the data collection. Also some children were non-verbal, lower ability etc which stopped them being able to take part in this study, which perhaps may have excluded those of the least ability from participating.

Social phobia -

It is interesting to note that social phobia was not believed to be a major concern for the pupils involved in this study. 89.2% of the pupils reported that they do not have any difficulties in this area. Teacher and parent scores were also high at 71.4% and 69% respectively. Social phobia was the second lowest scoring area of difficulty from all sources – pupil, teacher and parent. This is surprising as based on previous research social phobia has long been established as an area in which pupils with ASD struggle (Bellini, 2006). As ASD is a condition characterised by social communication difficulties (A.P.A., 2017) which result in difficulty in initiating and maintaining social interactions (Magiati, Tay and Howlin, 2014) it is worth considering that perhaps the high number of pupils believing that they do not have a difficulty in this area. This may be due to the fact that they believe that they behave in a manner which is suitable and do not perceive their actions as different to others. However when this is considered alongside the teacher and parent scores who concur with the children that social phobia is not an area of concern. These results

do imply that most of the pupils in this study do not have any difficulties in the area of social phobia which is a new finding not found in previous research.

High level of hyperactivity and emotional symptoms -

The SDQ was undertaken only with teachers and parents as it is only designed for older children and not those within the age range of this study. In addition to the five sub scales the SDQ can also generate an overall total difficulties score. This overall total difficulties score took into account the following four sub scales – emotional symptoms, conduct problems, hyperactivity/inattention and peer relationship problems excluding prosocial behaviour. As shown in table 19 the mean for total difficulties is 14.0 for teachers and 20.6 for parents which are in the ‘borderline’ and ‘difficulty’ ranges respectively. A result of 20.6 is well within in the difficulty category (parents) and 14.0 in the higher end of the ‘borderline’ range (teachers). Therefore these results would imply that the majority of pupils are perceived by their parents, and a significant number from their teachers’ point of view, as overall having difficulties in the areas of managing emotions, maintaining focus and attention, initiating and maintaining peer relationships and exhibiting non-age appropriate behaviour which can violate the rights of others in school.

Both the teacher and parent results scored the highest mean levels in hyperactivity/inattention and secondly in emotional symptoms. It is perhaps not surprising that if there is a difficulty in hyperactivity/inattention this would be picked up especially by the teacher as they would clearly be able to see this during the school day. Charman, Ricketts, Dockrell, Lindsay and Parlikara, (2015) also conducted research using the SDQ as a tool with pupils with ASD and language impairments. In Charman et al. (2015)’s research, like this study, it was also found that the emotional score from the teachers regarding the pupils was very high so this is consistent with these findings. The high level of emotional symptoms is also reflected in the scores of the RCADS; the SDQ creates a broad coverage of difficulties whilst the RCADS provides a more specific focus on these emotional symptoms. For both teacher and parents the third highest level of difficulty was found to be peer relationship problems. However this is not within the ‘difficulty’ range for teachers. This was again picked up by the RCADS results where social phobia is not a major area of concern for teachers

as the teachers were able to identify some children with whom the pupils concerned plays. It is suggested that if a pupil has difficulties in the area of social phobia then this would manifest itself in teacher observable difficulties, in making and maintaining peer relationships. Perhaps clarification is required for what teachers understand to be social phobia. Perhaps teachers' observations of children playing with others was misinterpreted as maintaining relationships when the children may in fact be only observing or copying their peers.

Therefore the quantitative results indicate that this study's findings regarding high levels of hyperactivity and emotional symptoms and panic, depression and separation difficulties found within the ASD population are in agreement with previous research, however a great deal of these previous findings have been with older children. Although in this aspect this study's findings concur with previous research, the low level of social phobia of pupils with ASD is surprising as this has been found to be a major concern of those with ASD previously. We shall now break down the findings further by examining the differences between the three respondents.

5.2.2. - Differences between perspectives

High parental scores -

When examining the RCADS results (table 14) it is clear that in every sub area the parents scored the pupils at a higher level of difficulty than the other two perspectives (except for in separation anxiety where the parents and teachers scored exactly the same (62.7% – table 15). There is a wide range of reasons why this may have occurred. Teachers may not have given the pupils such a high score on difficulties as the parents as they feel it may reflect badly upon them. Teachers are expected to maintain an inclusive classroom (DfE/DoH, 2015) and to suggest that a pupil in their class is really struggling may reflect that they are failing to provide this. Maybe as the pupil is with so many other children the teachers do not notice all the difficulties the pupil may be experiencing. Unlike a parent who has far fewer children in their care, a teacher is not able to focus continuously to one pupil and therefore may miss some aspects of the pupils' daily experience. Perhaps the parents notice the difficulties as the children are more comfortable and more likely to be themselves at home and their difficulties are clearer to observe. Parents may

also score the children differently as schools are structured places and the teachers can compare the pupil with ASD against his/her peers. Perhaps the parents do not have other children to compare their children with and therefore their comparisons are more likely to be with adults or older children and, compared to these groups' abilities, children will struggle. The frame of reference is wider therefore at school. There might also be the presence of challenging behaviour of pupils without ASD in a class so therefore the teacher might rate the pupil with ASD's difficulties as less. Stone, Otten, Engels, Vermulst and Janssens (2010) explored this idea. Stone et al. (2010) found that teachers perceptions maybe more one-dimensional than for parents. This may create a halo effect where one type of behaviour influences a person's perception of the other behaviours being assessed (Abikoff, Courtney, Pelham and Koplewicz., 1993). Overall teachers are making judgements in different contexts to the parents and the results in all areas reflect this. Stone et al., (2010) analysed SDQ results to test for reliability from parents and teachers. This study concurs with their findings that parents score their children higher especially when coupled with high parental stress and inadequate parenting. However Syed, Hussein and Haidry, (2009) found the opposite of this to be true in their study of emotional and behavioural problems in primary school children in Pakistan. This study found that teachers scored the pupils slightly higher than parents when asked to rate their emotional and behavioural problems. This study is unusual as it finds teachers score pupils higher in difficulties than pupils' parents. Perhaps this may be due to nearly half the respondents, the mothers, being described as 'uneducated' (p. 624) which brings into question the reliability of the responses received.

When comparing the pupil results with the two adult scores it is generally seen that the pupils have self-identified far less difficulties than do the adults. In five out of the seven sub areas the pupils score at a lower difficulty level. The teachers scored higher in panic disorder and obsessive compulsive, but these differences were very minimal (0.2 and 0.4 respectively). Within each of the sub areas the majority of the pupils reported that they did not have any difficulty in any area. This majority was between 64.7% (panic disorder) to 89.2% (social phobia). The T-scores means all fell within the category of no difficulty as they scored less than 65. Indeed the highest T-score mean was 58.6 (panic disorder) which is far below the threshold level of 65 for having a borderline difficulty. It is interesting to consider why

the pupils believed that their difficulties were minimal. Perhaps the pupils are happy with how they are or lack the ability to recognise that they are not conforming to the standard expected behaviour for their school setting and age. Perhaps the pupils are aware of the 'correct' answer on the scales and understand that at school they must try to get things right. This may have affected their responses and not created a wholly truthful response. Sterling et al., (2014) found that the RCADS is able to allow older youth to reliably interpret and answer items pertaining to their emotional state. However when concerning younger children, such as those involved in this study, Sterling et al. (2014) also concurred with the findings of this study whereby the younger the pupils the more they self-identified far less difficulties than the adults and under report their own symptoms. Therefore the findings here are not surprising as they are in agreement with previous research. It does remain unclear however whether the children are under reporting or the adults over reporting the areas of difficulty at primary age which could be a useful focus for a future study

Parents and teachers somewhat agree, pupils do not agree -

There was only one moderate significant correlation between any respondents in the RCADS results. This correlation was between the teachers and the parents in the subarea of generalised anxiety. Generalised anxiety was not a subarea which featured very highly in the level of difficulty results, highlighting that both teachers and parents agreed that this is not a main area of difficulty. The other teacher and parent significant correlations were low and in the areas of separation anxiety and major depression. Therefore the teachers and parents agree modestly on the difficulties the pupils are experiencing however this is only a low to moderate agreement, with the parents seeing far more difficulties in the same children than the teachers.

The pupils' results did not correlate with any of the teacher or parent scores therefore showing that the pupils are seeing things very differently to the other respondents. The higher level of reported difficulty of parents compared to children was also observed in Hallett et al. (2013)'s study concerning anxiety symptoms in twins with ASD. This study also found that, like here, children self-report a lower level of difficulties relating to anxiety through the use of the RCADS compared with adults. This is in concurrence with this study as the pupils were not found to agree with either

of the adults – teachers or parents and it is possible to conclude that the adults have a far more similar view of the difficulties experienced by the pupils than the pupils themselves.

The inclusion and comparison of three perspectives - pupil, teacher and parent - using the RCADS is a new area not covered before in a research study. There has been research concerning the levels of anxiety that a child may be experiencing from the parent and child only perspective. In addition to Hallett et al. mentioned above, Kaat and Lecavalier (2015) undertook research concerning the perspectives of parent and child using the RCADS. The key findings included that the higher the IQ of a child for example, the higher the parent-child agreement was ie. higher intellectual abilities make it easier to report general emotional tendencies. This may part way help to explain how in this study the child and adult scores were so far apart as the children were young and of primary school age. The teacher and parent scores were far closer in agreement than with the pupils. This difference may be explained as alexithymia or the inability to identify and describe a person's own emotions. Although when examining the criteria for ASD (DSM-5 and ICD-11) alexithymia is indeed related to ASD, Shah et al. (2016) disagrees and argues that it should not be thought of an inherent part of ASD. Therefore the association between the two is unclear and in relation to this study, does not confirm the reason why the pupil scores were far separated from those of the adults.

Wide range of results -

It is interesting to note that within the teacher results there is a wide spread of scores in the different areas. In examining the results for hyperactivity/inattention it is possible to see that overall the mean score was 6.4 (table 18) which falls between the 'difficulty' and 'no difficulty' ranges. This would imply that most pupils were perceived to have borderline difficulties in this area. However the actual results in these categories are different. Only 4 pupils actually scored in the 'borderline' range which left 16 with 'no difficulty' and 19 with a 'difficulty'. When averaged out these scores created the 'borderline' mean average. In reality these results mean that there is a wide spread in results – many children have difficulties and many do not. Therefore the range of difficulty across the pupils is vast.

Therefore the findings highlight how the adults have a different, higher level of difficulty opinion of the functioning of the pupils than the pupils themselves do. Overall, although the teachers' scores are widespread, the parents believe the pupils have more difficulty than the teachers report. We shall now discuss the interesting correlations between the different areas and respondents to further understand the relationships between the pupil, teacher and parent perspectives.

5.2.3. - Relationships between pupil, teacher and parent perspectives

Conduct problems correlations -

Between the teacher and parent scores there is only one significant correlation. This significant correlation occurred in the area of conduct problems and is moderate. This indicates that in this area there is some correspondence between these perspectives and that teachers and the parents do not believe that the pupils have any difficulties in this area as individually the mean scores for this sub area were both not in the 'difficulty' range. As there has not been any previous research comparing SDQ or RCADS results from different viewpoints in this way, there is not any data available to compare these results. In addition it is interesting to note that the correlation between the teacher and parent hyperactivity/inattention is only just outside the range for a weak significant result indicating that the ideas the teachers and parents have about this area being an area of difficulty are somewhat related. However as this correlation is not at the 0.05 level it must be assumed that there is no correlation.

Pupil RCADS with Teacher and Parent SDQ -

The pupil RCADS generalised anxiety and obsessive compulsive scores correlate weakly to the SDQ teacher conduct problems. This may reflect that when teachers observed conduct problems in children, this is when the children are experiencing anxiety and reporting obsessive compulsive traits which may manifest and appear to teachers as conduct problems.

There was also a moderate correlation between SDQ parent peer relationship problems with RCADS child depression. Perhaps it can be inferred that what the

parents are perceiving as difficulty with peer relationships is what the pupils are describing as a depression. Maybe these peer relationship difficulties are resulting in child depression or vice versa. The moderate to strong correlation of SDQ parent prosocial and the RCADS child social phobia scores were surprising as it would be expected that more anxiety in social situations the lower the prosocial rating. Also there was not a correlation between the RCADS total pupil anxiety score and the SDQ parent total difficulty highlighting how the parents and pupils are not in agreement about the difficulties the pupil may be experiencing. However as there were so many correlations being calculated for this study it could be expected that some may be significantly correlated by chance.

The above additional pupil RCADS correlations are interesting and the RCADS does have good internal consistency (Chorpita et al., 2000). However it would have been useful to discover research which has been undertaken to test the ability of children to give accurate answers to the RCADS questions in a generalised way. It is suggested that the pupils' responses may have been concerning how they were feeling at the time the test was taken rather than how they feel generally. It also would have been interesting to find research concerning the testing and retesting of children using the RCADS to see if their responses remained consistent however this is not currently available for primary aged children. Mathyssek et al. (2013) however assessed how well the RCADS measures anxiety within the adolescence age range over time. This research concluded that indeed the RCADS does measure anxiety well and that any changes in results during the different time periods accurately reflected true changes in anxiety levels. There is however no such similar information available for primary aged children.

Teacher SDQ with Teacher RCADS -

The teacher SDQ emotional scores all correlate with the Teacher RCADS scores with the exception of the RCADS teacher major depression. This is what was expected as they are from the same source and show teacher consistency. Three of these correlations are strong indicating the reliability of these measures. They do not correlate with major depression as this score is not generated from the anxiety scores. The SDQ teacher conduct score correlates with the RCADS teacher depression score which is interesting. The teachers see a link between the

depression of the pupils and the negative behaviours towards others. This is not dissimilar to the child scores as the links of RCADS child depression link to SDQ parent peer problems and next links to RCADS teacher depression to RCADS parent peer problems. Therefore there is some consistency between the SDQ teacher emotional scale and the RCADS results. Overall the teachers are most consistent with themselves across the scales but the parents are less consistent.

Teacher RCADS with Parent SDQ –

There are some interesting links between parent and teacher measures (table 20). Where parents report SDQ emotional symptoms, it is picked up by the teachers as RCADS panic disorder showing a moderate correlation. Therefore parents are reporting emotional difficulties at a moderate degree where teachers are observing panic.

Parent RCADS with Teacher SDQ and Parent SDQ -

As with the SDQ teacher emotional scores and teacher RCADS anxiety scores mentioned above, the SDQ parent emotional scores and the parent RCADS anxiety scores also correlate. The SDQ parent emotional and the RCADS parent anxiety scores correlated in every area. This is to be expected as described above for the teachers, as the RCADS is picking up in more detail the concerns raised by the broader SDQ survey. The parents record high SDQ emotional scales and high RCADS anxiety scales so therefore there is a cross scale similarity of a high level of difficulties over the two different scales.

The RCADS parental anxiety ratings also link with the SDQ teachers' emotional scores with the exception of obsessive compulsive. The parent depression score correlated with the teacher total difficulty score. These parent and teacher correlations are the most interesting as they highlight the connections between home and school. The teacher SDQ total difficulty correlated with parent RCADS major depression showing a link with depression and all the other difficulties. These results therefore do not focus just on anxiety and stress but on a range of difficulties including depression. We can see some signs of relationships between the anxiety levels even though they have different ideas of anxiety for each

child and parents overall give much higher levels of anxiety than teachers. It is suggested therefore that anxiety therefore can be seen to underlie the behavioural problems observed at school.

Overall the SDQ teacher emotional score does not correlate with the pupil's reported anxiety levels but does correlate with the anxiety levels reported by teachers and parents. These findings may be because the pupils cannot summarise their general feelings which is exactly what the two surveys were asking them to do. Perhaps the pupils are only able to access and describe their emotions at a particular time but not generally. Therefore due to the agreement of parents and teachers but not the pupils it is suggested that the children are not so reliable in reporting their emotions in a generalised way.

Therefore broadly the findings from part one show that pupils with ASD are experiencing emotional and behavioural difficulties in the classroom. In particular the pupils are experiencing panic, depression and separation anxiety although not social anxiety. Some of these difficulties, eg. separation anxiety, are consistent with individuals with ASD, although social anxiety is not. Social anxiety was found not to be a difficulty which is unusual and a new finding. The levels which the pupils are experiencing these difficulties vary according to the respondents, parents reporting the highest levels, followed by teachers and then the pupils themselves. The parent SDQ and RCADS and the teacher SDQ and RACDS responses correlate with each other highlighting the link between the emotional difficulties of the SDQ and the anxieties of the RCADS. There remains some questions regarding the pupils' abilities to report accurately their difficulties however based upon the responses given in this study, pupils' responses only weakly correlate to adults.

After considering all these results we are left with questions regarding the authenticity of primary aged children's responses. Are these accurate over time or just responses of the moment? Does ability affect access to the surveys used and how might non-verbal, lower ability children be accurately included in future studies in order to include the widest range of participants? What issues are affecting both the teacher and parent scores and how could these be reduced? Perhaps future studies could include links between ability and participants' scores with a view to improving the accuracy of participants' responses.

The discussion regarding the results from part two of the study will now follow. The qualitative data generated from the teacher interviews will be examined and from the main findings, conclusions drawn.

5.3 - Part Two – Summary and relation to research

Part two of this study was concerned with the background knowledge and training of current classroom teachers and how the teachers make sense of the emotional, social and behavioural functioning of pupils in their classes. As described in chapter 4, the main results were:

- Limited teacher training and concerns about teaching pupils with ASD
- Non-specialised strategies generally employed
- Limited reviewing and developing of strategies
- Future support – including TA training and specialist staff

This thesis will now discuss the limited training of teachers with regard to ASD and how this is reflected in the non-specialised strategies currently being employed. How the strategies which are being used are reviewed and developed will then be explored followed by the idea of training TA's and the greater use of specialist staff as a way of providing future support.

5.3.1 – Background knowledge and training of teachers and the initial concerns

Lack of training -

This study found that there is a lack of training available to teachers in training prior to qualification. However most of the teachers (96.2% - 25/26) had experience of teaching pupils with ASD previously (table 23). This is consistent with the finding that the frequency of diagnosing pupils with ASD has increased dramatically through the last decade (Pellicano, 2013) and diagnosed pupils with ASD are more commonly to be found in schools. From the data generated from this part of the study it would appear that it is through this previous hands on experience of working with pupils with ASD and working with other staff members that teachers gain the

most learning and knowledge about ASD. This is supported by the data that only 19.2% - 5/26 (table 22) of teachers actually had any type of training in teaching pupils with ASD before they had their first class whilst the number of teachers who have had training in teaching pupils with ASD rises to 42.3% - 11/26 (table 22) after qualification. Whether the teacher was trained in the UK or elsewhere does not seem to affect the level of ASD training they received. Although 40% - 2/5 of those trained abroad received training in ASD as opposed to 14% - 3/21 in the UK (table 23), the low numbers of those trained abroad who took part in this study makes generalisations difficult. The 40% only actually represented two teachers (out of the possible 5) and so we cannot draw a strong conclusion.

Those who have qualified more recently received both more SEN and ASD training prior to taking their first appointment than their more experienced colleagues. Therefore it is apparent that for those trained in the UK, the less teaching experience a teacher has, the more likely they are to have had training in ASD during qualification but this still an under developed area. It is suggested that this could be improved. This is also true of training which has been carried out after qualification via schools. These results imply that the level of SEN training in universities has increased in more recent years. Perhaps these findings reflect that as the frequency of children with ASD in mainstream schools has increased, (96.2% - 25/26 (table 22) of teachers had prior experience of teaching pupils with SEN) universities have reacted to this reality. However it is also possible to consider that the training of teachers in teaching pupils with ASD is not receiving a strong focus at present both here in the UK and abroad as the numbers of teachers with training in ASD pre-qualification are still low. It is clear that this has been developed over the last decade however it is not a universal provision which is surprising when we consider the numbers of pupils with a diagnosis of ASD are continuing to rise. As most of the teachers (96.2% - 25/26, table 22) trained at a university, undertaking a Bachelor of Education or PGCE, it is here where further training could take place. Only one teacher (3.8% - 1/26) had completed the Graduate Teacher Programme which is completed in schools rather than at university. It is also interesting that those teachers who have been qualified for a longer time, over 20 years, have received more training as well. This may be simply that they have been employed in schools

longer and therefore simply by length of service have had opportunities to training in this area in their schools.

This idea of further training for teachers in order to improve provision for pupils with ASD has been studied by Leblanc et al. (2009) and has been found that “even a limited amount of professional development and/or training...can both significantly increase...knowledge of autism...and...practices as well as reduce overall stress and anxiety levels” p. 1. Male (2011) also found this to be true and concludes that further SEN training for teachers results in more positive attitudes towards inclusion. Therefore the ideas discovered in this study are consistent with this literature and the lack of SEN training for teachers is creating a less than positive attitude towards inclusion.

If we pull back a little and compare this with the 2015 demands of the DfE Code of Practice of “early identification ... and early intervention” (p. 19) the two appear to be at odds. It is difficult to imagine how pupils can be identified quickly once they begin at school when the training of their teachers is lacking. Without specific training in this area it is difficult to imagine how teacher would be able to comply with this guidance, especially N.Q.T.’s without prior teaching experience. Therefore this is certainly an area which could be developed.

Initial teacher concerns -

During the first section of part two teachers were asked about their own concerns about teaching a pupil with ASD. This is a new research focus as there has not been previous research in this area. The nearest research regarding actual concerns about children with ASD has been from the parental point of view. Ozonoff et al. (2009) studied the concerns of parents with young children with suspected ASD and found that they were generally concerned with speech and social difficulties. There has not been any research about concerns from a teacher’s perspective. This study here found the percentage of teachers who had concerns about teaching a pupil with ASD was very high (84% - 16/19, table 26). This is perhaps not surprising as there appears to be a lack of training available prior to qualification which has resulted in a lack of confidence and fear. This can be compared favourably with Avaramids, Bayliss and Burden’s 2010 work which found

that those teachers who had the least professional development in the area of SEN held the least positive attitudes towards inclusion. The main concern that 81% - 13/16 (table 27) of teachers mentioned was the difficulty of managing the pupil's communicational needs – the pupil understanding the teacher and the teacher knowing which type of clear language would be best to use. This concern was also reflected in the requested support discussed in 5.3.4. Kozlowski, Matson, Horovitz, Worley and Neal, (2010) also studied parental concerns and also found that the main area of worry was with communication. This is interesting as it matches up with the teachers' concerns for a child with ASD – managing communication difficulties (table 26). Therefore, although teachers' concerns have not been investigated before, the above findings are consistent with the concerns of other adults interacting with children with ASD regularly – the parents.

The second most frequent concern was the idea that as all ASD pupils are so different it is difficult to know how to approach them. This idea is perhaps a reflection of the lack of specific ASD training available to teachers. All pupils are different, with ASD and without ASD, and therefore this concern could really be applied to the whole class. The reason why so many teachers mentioned this may be because due to a lack of training, they fear not having the correct skills to deal with the sometimes challenging behaviour from ASD pupils. There are commonalities which allow a diagnosis of ASD to be given. Over half of these teachers felt that they were unsure of what these traits were and therefore how to approach them.

Managing behaviour, social difficulties and depression also all featured highly on the list of concerns which many pupils with ASD experience. Nearly half of these teachers (44% - 7/26) were concerned about managing the behaviour of the pupil with ASD. It is perhaps unsurprising that this concern featured so highly as managing behaviour can take a large amount of time and, if aggressive or violent, can also affect the rest of the class. There may be a fear of being unable to cope with situations which may arise and challenging behaviour especially for newly qualified teachers.

Perception of difficulties -

The teachers' perception of the origin of most of the pupils' difficulties was anxiety (table 28). Again this is an area which has not been previously investigated. Anxiety can be an observable trait, eg. repetitive movements, crying etc, which may be a reason why it is listed so highly. The teachers can observe these actions taking place in the classroom easily as they can be disruptive and very noticeable. But a large proportion of the teachers did not have an opinion of what was causing the difficulties the pupil is experiencing. Again this may be a reflection of the lack of training available as the teachers have not had a great deal of time during training to think about and address the issues surrounding the pupils with ASD in their class. Nearly one fifth of teachers mentioned problems at home as another cause. As teachers, these staff members have access to a range of personal and confidential information about the pupil and his/her family. For example, number of years at home address, home setting, difficulties of siblings, adults living in the home, welfare allocations, criminal convictions of parents/guardians etc is standard information shared with schools. Therefore teachers would be in a position to hold this information which they believe may be affecting the pupil.

From these responses we can again see the benefit in further ASD training, this time in reference to reducing the difficulties of the pupils which will in turn reduce teacher concerns. Teachers believe that the difficulties the pupils are experiencing are often based upon anxiety which can lead to undesirable negative behaviour in the classroom. By having the skills and knowledge to better support anxiety it is possible that challenging behaviour will decrease, thus helping the pupil with ASD, his/her peers and the teacher to work in a more calm environment.

We will next examine the ways in which the difficulties pupils with ASD experience is currently being managed in the classroom. Firstly the range of strategies employed will be discussed including with specific reference to supporting anxiety.

5.3.2 – How primary teachers respond to social, emotional and behavioural difficulties

Range of strategies employed -

The findings in this section have allowed a range of strategies currently being employed in contemporary classrooms to be examined, something not done before. Outside of the classroom environment there has also been research concerning which strategies are useful for the parents of children with ASD in their homes (Higgins et al., 2005) but not for teachers in the classroom. The teachers described how they used a range of strategies to respond to the pupils with ASD's social, emotional and behavioural difficulties in the classroom. Of the strategies described, it is interesting to note that the most popular strategies are the most basic of the available strategies – visual supports (82% - 32/39, table 29). Strategies such as TEACCH (an intervention designed exclusively for pupils with ASD) features very far down the list in table 29 with only 15% - 5/39 using it. Similarly the 'Attention Autism' programme which exists to address the needs of pupils with ASD in the classroom only accounted for 5% - 2/39. Indeed it appears that strategies which require further training and skills to incorporate into the classroom are used very infrequently. Makaton, ELSA, TEACCH and 'Attention Autism' all feature low on table 9 and are therefore used infrequently. Marks et al. (2003) discussed how there is a wealth of research and information regarding the areas in which pupils with ASD may experience difficulties and how they can be supported. Although Marks et al.'s work, unlike this study, did not investigate the actual usage of strategies for supporting the needs of pupils with ASD in the classroom, it did list the existence of some specific strategies (eg. visual supports) in general settings which are consistent with the findings of this study.

The above finding also links with the existence of strategies for pupils with ASD and pupils without ASD. As seen in the previous paragraph strategies which require additional training to support pupils with ASD are not in widespread use. This concurs with the teachers' response regarding the use of strategies for children with ASD and children without ASD. Table 23 shows how 34.6% - 9/26 of teachers use the same strategies with all pupils whereas 65.4% - 17/26 do not. Over 1 in 3 teachers use the same strategies with pupils without ASD as for pupils with ASD. Indeed Blatchford, Russell and Brown (2009b) concurs with this finding that there are

generally no different strategies being employed with pupils with SEN. Blatchford et al. (2009b) found that the most individualised learning came from teaching assistants and not teachers resulting in even less teacher – pupil contact. Taken in the most positive light this may make the pupils with ASD feel more similar to the rest of the class and less different as their school experience is the same as others with little additional teacher focus. This may have many positive effects. The pupils with ASD may feel more connected to their peers and less anxious about being singled out in class though the use of specific approaches. Additionally it reduces the workload of the class teacher as no extra time is required to make resources or train staff on how to use them. However it does raise concerns that perhaps the approaches being used are not targeting the pupils' needs specifically and therefore are not individualised in their support. By using only general, mainstream approaches in the classroom, the pupils with ASD may be missing out on benefitting from the resources available to support them. Any research completed concerning how to include pupils with ASD through approaches and resources are not benefitting the pupil as they do not have any access to them.

Strategies to support anxiety -

Table 29 showed that although only 33% of teachers felt that anxiety is an underlying source of the pupil's difficulties 85% - 33/39 (table 31) actively use some sort of strategy to attempt to alleviate this anxiety. This is a major increase perhaps showing that behaviour indicating anxiety is being responded to but is not labelled as anxiety. The measurement of heightened levels of anxiety within children with ASD compared with children without ASD was of interest to Hollocks, Ozsivadjian, Matthews, Howlin and Simonoff (2008) who found that a higher level of anxiety is found with those with ASD which could be measured in a number of ways. This concurs with the teachers' responses concerning how anxiety is a main cause of difficulties for pupils with ASD. This also agrees with the findings in part one where it is clear that the broader emotional symptoms picked up by the SDQ survey are explained more clearly by the RCADS anxiety scales and that anxiety is a main concern for pupils with ASD. Exactly how anxiety is being supported in the classroom was explored in this study and this is again an area in which there has not been previous research.

It is perhaps unsurprising that without the presence of established formal programmes such as TEACCH in schools the main strategy teachers use to manage anxiety is to remove the pupil from their classroom (27% - 9/39, table 31). This strategy would indeed remove the pupil from the situation and would also remove any distraction the pupil with ASD may be causing his/her peers. Use of 1:1 (9% - 3/39, table 31) similarly may be the withdrawal of the pupil from the class to work with an additional adult.

We will now examine how much time is being focused on the strategies employed through the strategies being reviewed, developed and possibly abandoned within contemporary primary schools. In this way a fuller, broader picture of the importance and significance of the strategies used in school will be developed.

5.3.3 – Reviewing, developing and abandoning of strategies

Reviewing and developing strategies -

The ways in which schools make decisions about the use, development and cessation of strategies is also something which has not been investigated before and therefore these findings provide a contribution to knowledge in this area. Table 23 highlights the total lack of reviewing the strategies used to support pupils with ASD in the classroom. All of the teachers stated that there was not any type of record keeping, collection of data or discussion as a teaching staff regarding changes in practice. All the teachers stated that there is not any record of the workability etc of used strategies in their schools. Individually for teachers this means that they do not have any record of what has worked well or what could have been improved regarding the employment of strategies. This means that from year to year the teachers have to rely upon their memories concerning which strategies they have used and as the years go by these memories may fade or become inaccurate. If a teacher does not have a pupil with ASD for several years, for example, they may very well forget any benefit some strategies may have made with a pupil with ASD. Therefore they may be starting from scratch with very basic knowledge of useful strategies when required to teach another pupil with ASD several years later. There is therefore little promotion of reflection and the opportunity to develop and refine strategies which build upon their current practice. This appears to be in opposition to

the 'assess, plan, do and review' four-part cycle approach promoted by the DfE/DoH (2015) as described in 2.6.3.

This lack of reviewing is also reflected in the high level of class teacher involvement in selecting and using strategies in the classroom (100%) in table 32. Although this has its own benefits such as the strategies being more likely to work if the teacher has selected them herself/himself, it does also shine a light on the autonomy each teacher has when working with a pupil and the lack of time spent on accessing what may work well and working with colleagues to improve the provision offered.

As a school this lack of reviewing and developing also highlights the lack of continuity which may follow for the pupil. If there is not any reviewing or developing then the following class teacher cannot build upon his/her colleague's work with strategies for the pupil with ASD. Although some items such as visual time tables may be passed up to the next class there is not any reflective thought about their development. Therefore there is no way of measuring the usefulness of the strategies employed or of developing them for either this pupil or others in the school. This is also new research as there is not any previous research in this area which has not been attempted before. Brookam-Fraze, Drahotka and Stadnick, (2011) did complete some investigative work surrounding the usefulness of a strategy employed to support children with ASD. However Brookam-Fraze et al., (2011)'s study only focused on community mental health therapists' strategies in the community with parents present rather than with teachers in schools. This research concluded that the therapists perceived the strategies employed to be useful which was supported by a measured improvement made by the children at the end of the study. It would be beneficial for future research to investigate how the usefulness of strategies could be measured in school settings.

Although the teachers all stated that there was not any system of reviewing the use of strategies, the interviews undertaken asked the teachers to think about their current use of strategies and to assess how useful they believe them to be. As shown in table 33, 82% - 32/39 of the teachers felt that the strategies employed were useful in helping the pupil with ASD in their classroom. However the number therefore of those teachers who feel that the strategies are not very useful or not at all useful is nearly one fifth. This highlights how there is room for major improvement

in the provision of support for pupils with ASD. This study indicates that for nearly every one in five pupils with ASD in this sample the provision they are currently receiving is not useful to them. Instead of supporting the pupils' needs, these strategies are not working and are therefore ineffective in their aims. The DfE/DoH (2015) as described earlier lays out the 'access, plan, do, review' four-part cycle which should be taking place in schools. Perhaps it is now time for a focus on the 'review' part of the cycle in order to improve the useful provision being offered to pupils with ASD today.

Decision making -

As described chapter two the Department of Education guidance (2014) explains that class teachers are responsible for the pupils in their care. This applies even when another member of staff, for example a 1:1, is working with a pupil. Every school must have a SENCO teacher in place who will support class teachers with their provision for pupils with SEN. There has not been any previous research in this area. As described above 100% - 39/39 (table 31) of all pupils with ASD have a class teacher who has been involved in the decision making process of which strategies can be employed to assist them. This shows a high degree of teacher input and control into how their class is run. As class teachers are the staff who are using the strategies, with the 1:1, on a daily basis it is unsurprising that they are heavily involved in the formation and agreement about the use of the strategies employed. The class teachers' involvement at the decision stage may help to increase the actual usage of the strategy. By agreeing to use a certain strategy the class teacher would agree that it is something feasible and suitable for both the pupil and the school environment. This may be reflected in table 32 where the list of reasons why agreed strategies are not used as there is no listing for 'teacher did not like'. 73% of teacher utilise the SENCO in their school when deciding which strategies to employ. One benefit of involving the SENCO is to use the more specialised knowledge of the SENCO regarding special needs. If the SENCO has been in post for a few years, there is the added benefit of the SENCO knowing the pupil as they grow and this educational history of the pupil in their school can contribute to the decisions being made as well.

Abandonment of strategies -

As there are no official formal ways in which the strategies employed in schools are accessed or reviewed, it is interesting to consider in which ways and what has affected the abandonment of some strategies. Table 33 lists the reasons teachers (who confirmed they had stopped using a strategy/strategies) mentioned regarding why the strategies employed were stopped. The two main reasons were that the pupils did not like the strategy (41% - 7/17) and that the strategies had little effect on the pupil (35% - 6/17). From the findings above regarding the limited use of specific programmes designed for especially for pupils with ASD it is perhaps a predictable result that some of the strategies are not focused and suitable for the pupils they are intending to help. Pupils not actually liking the strategy was also a joint main reason for abandonment (41% - 7/17) alongside the reason of the pupil choosing to abandon the strategy (6% - 1/17) shows that some teachers are including the student voice in their decisions whether this is verbally from the pupil or an observable occurrence. A member of staff employing a strategy leaving the school featured quite highly in table 32 at 18% - 3/17. This is new knowledge as the reasons surrounding the abandonment of strategies has also not been investigated before.

The absence of systems for reviewing, developing and abandoning the strategies used in schools will now be followed by a discussion regarding the current support offered to teachers and ideas for future support for both pupils and teachers.

5.3.4 – Support teachers have received and ideas for development in this area

Support offered to teachers -

The highest level of support for class teachers when supporting the needs of pupils with ASD has come from the school's SENCO. The SENCO is a qualified teacher who, having worked as a class teacher, has chosen to specialise in the area of special needs provision. As each school is required to employ a SENCO on staff, the accessibility of this support for the class teachers should be easy. As the SENCO has also been a class teacher it is probable that his/her support is aimed at being realistic concerning which strategies are feasible and achievable in a classroom. 42% - 11/26 (table 32) mentioned the previous class teacher as the

second highest source of support. Naturally the previous class teacher has been working with a pupil for the whole previous year and his/her experience would be very useful in order for some type of consistency and continuity to be established. This is especially true as there is not a system of reviewing strategies together. Therefore it is other school staff members – the SENCO and the previous class teacher – who are responsible for providing the most support to class teachers. These may not be specialists in the area of ASD and therefore have no additional qualifications or experience which would make the provision offered to these pupils more focused as the SENCO's training is broadly concerning SEN and not focused on ASD. However new to role SENCO's are now required to undertake an additional qualification regarding special needs education. Perhaps this is wise as it appears from this study that SENCO's play a major role in the support of class teachers with pupils with SEN in their classes.

It is interesting to note that the three lowest frequency references people from outside the daily school environment – ASD specialists, Educational Psychologists and Speech and Language Therapy. Although these three groups of people would know the pupil the least out of all the stakeholders involved, they also are the most specialised in the areas of difficulty the pupils are experiencing and their limited input does not allow their specialised knowledge to be included. This lack of specialised support is reflected in the teachers' responses regarding how their support could be developed.

Ideas to support teachers -

All of the teachers interviewed had ideas concerning how support could be developed to improve their own practice. The teachers felt mainly that they needed to attend courses focusing solely on ASD. This is to be an expected response as there is a lack of training being undertaken in the area prior to teacher qualification as shown previously. Secondly there is a need for teachers to work with specialist ASD staff within their own schools (21% - 4/19, table 35) in order to develop strategies which are specific to the pupil in their class and achievable within their own school environment. If specialist support is what is sought it is concerning that this is not taking place as the main source of help (table 34). Cost may be a factor

as the SENCO and previous class teachers are already on staff and their support is free of charge. Attending courses outside of the school setting incurs a cost as does the employment of visiting specialist staff for the more and more primary schools becoming academies.

The effectiveness of the use of specialist training and support has been investigated. Woodbury-Smith et al., (2014) concluded that within the adult male ASD population ASD specialist wings should be developed within the criminal justice system to meet the men's needs. Although this study was not concerned with adult males with ASD and unlawful behaviour it does concur with the teachers' ideas that specialist advice and knowledge is required in order for the needs of individuals with ASD to be met. At the other end of the age scale, Magiati et al., (2007) investigated and promoted the role of specialist individuals working with very young children in nurseries and found that the use of ASD-specific nursery provision showed improvement in the attainment level in children with ASD. This concurs with the teachers in this study who requested more specialist assistance for pupils with ASD.

Ideas to develop support for pupils -

Table 36 lists the teacher responses concerning how support could be developed for pupils with ASD. The most frequently cited development the teachers would like to see is more small group work (35% - 9/26). Due to some of the common characteristics of ASD, such as disliking noise, small group work is seen as a better option for pupils with ASD. Small group work also has the benefit of the adult leading the group being much closer to the pupils and able to respond more quickly to any problems which may arise. Pupils could also be selected with whom the pupil works well to aid a smoother session. Small group work does rely on funds being available for the employment of enough adults to allow these groups to take place. The second highest response concurs with the findings above regarding the use of specialist staff. Many teachers feel that the pupil would be better supported with targeted strategies surrounding social and communication skills from specialised professionals.

There was a lack of confidence in the abilities of teaching assistants in schools regarding the support of the needs of pupils with ASD. When considering

that the growth of the teaching assistant role in England has been so great that without them many pupils could not manage in a mainstream school (Lacey, 2001) it is perhaps unsurprising that their training should also be developed. Groom and Rose (2005) explored how the training of teaching assistants is possible despite employment terms meaning that twilight courses are difficult to arrange. Instead teaching assistants often receive their training during the day when they are released from class. They also found that further opportunities for training should be made available to TA's due to the fact that TA's work with a wide range of pupils with SEN and to these pupils they have a very important role. Alborz, Pearson, Farrell and Howes, (2009) also promoted the training of teaching assistants as they found that trained teaching assistants can help pupils however these teaching assistants must be skilled as Webster (2016) found that sometimes the teaching assistants were misleading or inaccurate in their interactions with the pupils. Sharples, Webster and Blatchford (2015) also advocate the use of teaching assistants to support lower ability pupils through training however they cannot be used to replace a teacher. Webster (2016) however found that this was indeed happening and that as a results the pupils who needed the most support from the teacher were actually the pupils who had the least interaction and teaching assistants were taking over that role. Therefore there is support in literature for the training and development of teaching assistants in schools.

Most teachers agreed that external specialists need to be involved far more with the strategies and support offered to pupils with ASD. Some teachers felt that these professionals should come into schools and lead sessions with the children however most felt that the best provision would include the specialist staff working with the pupils and training the teaching assistants to carry on this work daily while they are at other schools.

The findings from the interviews with teaching staff in part two allowed a snapshot of the contemporary situation in primary schools in England to be taken. Overall there are high levels of concern over teaching pupils with ASD however their training in this area was low and this is therefore a major concern. Without training the probability of the early identification required by the DfE (2015)'s guidance is diminished and the concerns of teachers grow. It is suggested that training teachers would reduce teacher's fears over their ability to manage behaviour, for example,

which may affect the class. The majority of teachers felt the pupils' difficulties stemmed from anxiety however the range of strategies employed to support difficulties did not generally include any specialist approaches. Anxiety, as mentioned above, if unsupported, may lead to challenging behaviour, which leads to teachers' concerns. As Avaramid et al., (2010), found that the less training a teacher has in special needs, the less positive attitude towards inclusion they hold. Therefore in this light it is very important to increase the training available to teachers in order to stop this cycle but what training should be provided? It is suggested here that training should include ways in which to manage anxiety which may indeed include ASD specific programmes. At present there were very few ASD specific programmes being employed and simply general approaches used. However the pupils do indeed have ASD and perhaps with a more individualised programme geared towards their specific needs their anxiety would be reduced? This would have repercussions with funding the training of staff in TEACCH or 'Attention Autism' for example and maybe a start would be the training of SENCO's only who could pass the information to teachers in their schools following their training. This study suggests that this is an important point to consider for further development.

There is currently very little reviewing and developing of strategies in schools highlighting how there may be little improvements made for individual pupils. Indeed it is suggested that this is an area for improvement and development as it appears to be in direct opposition to the 'access, plan, do and review' DfE/DoH (2015) guidance. Class teachers make many decisions themselves but would welcome more support from specialised professionals in the classroom and the training of teaching assistants as the role of teaching assistants has grown considerably over the past years (Groom and Rose, 2005). We will now discuss the findings from the more detailed case studies of six pupils.

5.4 - Part Three – Summary and relation to research

Part three of this study explored the educational experience of six pupils in detail. Through observations and interviews interactions and partnerships were monitored as was social and academic inclusion and the ways in which the pupils' needs are currently being met. As described in chapter 4, the main results were:

- Few pupil interactions
- Limited staff partnerships
- Academic and social inclusion debate
- Limited special staff and specialist strategies employed

This thesis will now discuss the limited interactions, partnerships and specialist strategies employed in school and explore the perceived academic and social inclusion from both the class teacher and pupil perspective.

5.4.1 – Pupil and adult interactions

Firstly we shall explore the frequency of interactions between the pupil and the adult in the classroom. The observations of pupils during part three showed that for most of the time the pupils are in the classroom with their peers (table 38). This results in the interaction between the adults and the pupil occurring in the main classroom. Social interactions of pupils with ASD have long been investigated and the focus of much research and Carter et al. (2017) identified how few social interactions pupils with ASD have with their class mates. Although this study was not about the level of interaction between the pupils but between the pupils with ASD and the adults in the classroom, it also concurred that the level of interactions concerning a pupil with ASD was low. The inclusion of pupil to adult classroom interactions has developed research further than the literature currently available and as mentioned above these results agree with Carter et al. (2017)'s findings that the frequency of interactions of pupils with ASD is very low. In this study it was found that generally the pupil is not interacting but is just sitting as part of the class being led by the class teacher. Other interactions were very minimal such as interacting with a teaching assistant 1:1 or with a peer. It is not surprising that the level of interaction with a teaching assistant 1:1 is very low, as none of the pupils actually

have a pupil support assistant (1:1) who has been appointed to support only them despite the original rationale for teaching assistants in schools being in part to improve inclusion for students with special educational needs and disabilities (Sharples, Webster and Blatchford 2015). At best they have a shared pupil support assistant with other pupils with SEN or just access to the general teaching assistant with whom they interact very little. Perhaps the TA purposely does not interact very often with the pupil and only when necessary. Reasons may include to develop the pupil's independence skills as over reliance on an adult can impede the emotional progress of the pupil. Another reason may be this shared pupil support assistant is trying to manage a group of SEN pupils with various, more often different, needs and he/she cannot direct all his/her time to one pupil.

Within the group of pupils who had the middle level of difficulties the pupils interacted by both initiating and responding showing that this group of pupils were the most able to maintain conversations. When this is compared with the data concerning the level of support these pupils receive it is the middle group who have the highest rate, 100% - 2/2 (table 41), of support by sharing a teaching assistant. As this sample is so small it is difficult to identify if the assistance of a teaching assistant has enabled this group of pupils to socially interact more than their peers who have had less support.

This low level of interaction between pupils with ASD and their adult may be considered to be in conflict with the nature of inclusion today. The DfE (2015) describes how the aim for all pupils with SEN is "to achieve their ambitions" with "the best possible educational and other outcomes" (p. 24) although it is unclear how this will happen if the pupil does not regularly interact with his/her teacher. Indeed it is suggested here that the "high quality teacher that is differentiated and personalised" (p. 25) is unlikely to occur if the teacher rarely interacts with the pupil during lesson time. A low level of interaction also restricts the opportunities and quality of assessment for learning and therefore puts into doubt the amount of differentiated and personalised learning available to the pupil. This would be an area of interest to develop in a further study.

We will now consider to what extent the adults work well in partnership for the benefit of the pupil.

5.4.2 – Working partnership of adults

During the interviews the ways in which the adults work in partnership was explored and will be discussed here. All of the teachers spoke about how they needed time with the other support staff in order to fully support the pupil with ASD. As discussed in Groom and Rose (2005) it is difficult to find time in schools for teaching assistant training due to the nature of their contracts. This is also true when considering the times the teacher can work with the support staff. Generally support staff are paid from when the pupils arrive and until home time. As they are supporting pupils all day it is very difficult for the teachers to interact and speak with the support staff unless they ask them to stay behind after school or come in early which would be unpaid. Generally the teachers found the working in partnership with teaching assistants did improve the classroom experience for the pupils. The idea that the longer a teaching assistant has worked at school and the more training they have creates a better working partnership was also explored. It stands to reason that generally the longer someone does something the better they get as they improve. This was found to be the case with teaching assistants. The longer they have worked at a school the more the teachers felt able to work more closely with them. This may be partly because they know each other better on a personal level and also because the teaching assistants have a greater confidence as they understand their role better through their previous experience. This positive improvement in practice could also be increased by further training of the teaching assistant by specialist professionals as also found by Alborz et al., (2009).

Teachers felt that the working partnership works better after the teaching assistants receive further training from Speech and Language Therapy for example. In this way the teaching assistants have a clearer view of what they will do at school and perhaps are more confidence and secure when speaking and working with the teachers. By having a clear programme to follow, morale is perhaps raised as the teaching assistants feel they have been entrusted with something and can roll this programme out at their own discretion. This may be explained by Sharples et al., (2015)'s work that teaching assistants may feel more valued and have a better feeling of personal accomplishment and achievement in their work instead of going into sessions "blind" (p. 15, Sharples et al., (2015). This would also improve the teaching assistants' interaction with the teachers. Additional training by specialist

staff would also help to improve the difficulties in interactions mentioned when the teachers and support staff have different ideas about the level of support provided. There are difficult interactions at present concerning how the teaching assistants often do not see or understand the more rounded picture of provision which should be offered. Further training may help the teachers and support staff to jointly see the best way forward for the pupil together.

As there is not any collection of data or reviewing of approaches as a whole staff currently being employed, teachers do not work in partnership with their teaching colleagues at all with the exception of some discussion at the end of the academic year. Some teachers mentioned that they will go and speak with the previous class teacher when they are just starting with a new class. This partnership could be considered limited and may be restricted to a brief conversation about the general nature of the pupil and things the next teacher really needs to know. Any equipment can be passed over to the next teacher at this time as well. Therefore teachers collaborating and working together for the benefit of the pupils with ASD in their classes is not currently taking place in the sampled classrooms.

Teachers do however work closely with the SENCOs in their schools. As described in part two, SENCOs are teachers who have specialised in SEN and are in charge of this provision in their schools. The visible role of the SENCO as a powerful voice for pupils with special needs has been investigated by Cole (2007) who defines a successful SENCO as a teacher in a senior management position who therefore has the time and funding to energise and develop support and provision for pupils with SEN. Some teachers work a lot more closely with the SENCO in their schools than others. This may just be down to personal choice and personality. Perhaps the class teacher prefers to take general direction and then just work alone with the difficulties pupils in his/her class may be experiencing. Perhaps some SENCOs may be more visible in schools and therefore are more approachable creating a better working partnership for the benefit of the pupils. Also it is worth considering that some SENCOs are not class based and therefore are able to be available for more consultations with class teachers and able to build a more supportive working partnership. Although this is now generally the case, there are some schools where the SENCO is still a class teacher as well as SENCO thereby limiting access and availability. Dieker and Murawski, (2003) describe how teachers

and SENCO's must have time and effective communication, particularly with regard to curriculum needs and behavioural challenges to collaborate well. Da Fonte et al., (2017) described good collaboration in school should be "more than just having a conversation with a colleague. Collaboration should take into account...strong communication skills, the ability to share knowledge, and willingness to find the time to support teamwork" (p. 105). Therefore within the collaboration of teachers in schools there has been some research concerning teachers and SENCOs. As there are far more teaching assistants working in schools now, the collaboration between staff members could now include teaching assistants.

There is some support for the work of teaching assistants in the literature as they can improve social and emotional adjustment for the pupils whom they support and the teaching assistants will improve in their role following training (Alborz et al., 2009). However this is disputed by Webster, Russell and Blatchford, (2015) who state that teaching assistants can have a negative impact upon the learning and progress of the pupil they are supporting. This was found to be particularly true for pupils with SEN. Webster et al. (2015) do however conclude that with monitoring and training, the teaching assistants' role could improve the effectiveness of their provision.

We will now consider the extent in which pupils with ASD are included socially and academically in the classroom from both their own viewpoints and from those of their class teachers.

5.4.3 – Academic and social inclusion

All of the teachers and all of the pupils agreed that the pupils feel academically and socially included in their classes (table 43). The observations appeared to support these claims in as far as the pupils were with their peers and receiving only the general approaches which could be used with any pupil in the class. By not singling the pupil out by using different approaches, this made them feel more like the rest of the pupils, especially the older pupils who would notice a difference of approach more readily. However, although this approach may make the pupil feel more included, it may not be overall the most inclusive approach. By generally not employing any type of specific or middling/general ASD strategy, the

pupil may be missing out on assistance which could prove useful. There is therefore a fine line of including the pupils through helpful strategies but not making them feel self-conscious and different from their class mates. The only strategy which was observed which was specifically for the pupil with ASD was the use of ear defenders. The pupil self-selected these so therefore this was not adult directed.

All of the teachers stated that the pupils with ASD enjoyed school and learning. The pupils also agreed with this statement with the exception of one pupil. The teachers believed this is a reflection of the pupils' participation in the academic life of their class otherwise the pupils would not be so happy in school. Although, as previously discussed, there was a feeling that better relationships with the teaching staff made the pupils' support better, only half of the teachers believed that the pupil interacts appropriately with adults at the moment. This may reflect that even though the teachers believe the pupils are included academically, if they are unable to approach staff and discuss problems then perhaps the pupils are not able to work to the best of their academic abilities as they are unable to develop their understanding verbally with staff. Another sign of detachment from the academic life of the class may be that only one teacher felt that the pupil was wanting to please in their work. Perhaps this shows a detachment from the work and an ambivalent attitude towards it highlighting that maybe they are not as included as the teachers believe.

The pupils' responses explored this in greater depth. Half of the pupils stated that they do have problems learning in class due to distractions. Perhaps this is due to the lack of observable strategies observed and described previously. In addition only half of the pupils interviewed stated that they are able to complete the work set in school. Therefore although the pupils and teachers believed that the pupils were included academically with the rest of the class perhaps there were more difficulties than some teachers recognised.

Couper, Sutherland and van Bysterveldt., (2013) explains that it is important to remember that inclusion is about feelings of belonging not just placement in regular classrooms. The inclusion of pupils with ASD is often an ongoing challenge as the structure and expectations of school can highlight the social and emotional difficulties the pupils may have (Emam, 2014). Research has found that although there are difficulties with the inclusion of pupils with ASD, these can be overcome through teacher understanding of strategies for ASD, differentiation and social

support strategies in addition to the strong need for increased collaboration between teaching staff (Able et al., 2015) which will increase success rates.

Socially the teachers and pupils both agree that they are included in their classes (table 38 and table 39). They could list names of other pupils in the class with whom they are friends. However for some this list was rather limited and (as explained by the teachers) was restricted to pupils of the same gender and personality. As all the teachers described the pupils' interaction with their friends as calm, withdrawn and/or quiet it appears to give the impression that these pupils just follow along with other quiet children and do not lead or completely join in in children's games. All of the teachers also reported the different reactions of the pupils when they encounter a difficulty socially. All of the responses were negative – withdrawing, crying, violence, self-harming. Although most children have disagreements and fallings out with other children at school (and this has been a key priority for the UK government since the mid-1990s (Hallam, 2009)), these reactions show that this is an area in which the pupils with ASD struggle to manage their emotions. This struggle may also be seen in the pupils' responses regarding who they like to interact with at school. 5 out of the 6 pupils stated that they would rather be with adults than children (table 39). The other pupil replied that they did not mind. This high number may be a response to the help teaching assistants give to children in school. As mentioned previously by one of the teachers, some teaching assistants help the pupils too much and give them everything they want. Maybe as this is happening the pupils prefer adults as this interaction is much easier for them than with their peers. The preference for adults over children does not indicate a high level of pupil social inclusion in school. Another statement made by the pupils also adds to the conclusion that perhaps the pupils are not as included socially in reality as the teachers and pupils themselves believe. Only 4 out of the 6 pupils would like more friends in school. As their number of friends is already small, the statement that some are not interested in having any more implies that social needs are not featuring very highly on the pupils' needs. This apparent lack of wanting social interaction may be explained by Bellini (2009). Bellini (2009) describes how a lack of understanding concerning how to initiate and interact appropriately with others can result in social avoidance even if the individual wishes to be more social.

This can create “a pattern of absorption in solitary activities and hobbies” (p2) which may become usual, permanent and nearly impossible to change.

As these observations took place at different schools at different times it is possible to conclude that pupils with ASD are somewhat included academically and socially with their class during the normal course of a school day.

We will now explore the ways in which the needs of pupils with ASD are currently being met in the classroom.

5.4.4 – Ways in which needs are being met

The observations provided a great deal of information with which to answer this research question. As described in part one through the RCADS and SDQ results, there are needs surrounding pupils with ASD in classrooms which require support. Through the observations it was clear in which ways these needs are currently being approached. Firstly as there were not any specific strategies developed for pupils with ASD observed, it is suggested that these strategies are not currently being used. Of those strategies which were observed there was only one piece of equipment which could be considered as assistive technology (ear defenders) therefore the available resources are not currently being employed in schools. The strategies which were observed, calm voice, calling name, repeating instructions etc, do not require any extra equipment or special training of the teacher. They are all strategies which could be used with other pupils without SEN and with SEN, and not solely pupils with ASD.

Although there are programmes and interventions available to support these pupils, these were not seen in the case studies. Instead there was an expectation and hope from class teachers that specialist staff help the most and their input should increase. This was not reported by the pupils who perhaps did not understand how specialist staff work in schools or how to identify them. The existence of assistive technology to assist pupils with ASD has been investigated by Lancioni et al (2014), including different types of support such as social stories, (Hoffman, 2013), and video modelling, (Shipleigh-Benamou, Lutzker and Taubman, 2002). However there has not been any contemporary study which explores which

strategies are actually being employed with the aims of meeting pupils with ASD's needs.

The extent to which the pupils' needs are being met was assessed partly through the pupil involvement in the lessons observed. Naturally it is difficult to engage all the pupils all the time in a classroom however this study noted that nearly 60% of the time the pupils had an intense or good level of interest and engagement in their lessons (table 46). This implies that for most of the time the pupils' needs are being met. This suggestion is also reinforced by the observed pupil behaviour. As described in chapter 2, there are observable pupil behavioural traits which are outward expressions of internal struggles. Nearly 9 times out of 10 (89.4% - table 47) there were no observable behavioural difficulties. Despite the lack of observable strategies employed, most of the pupils appeared to be managing their needs well. However this was just a snap shot of the time that the pupils spend in school each week. It is possible that at other times the pupils express very different reactions.

In order to achieve greater depth of analysis of the observed lessons, individual interviews also took place with the teachers and pupils. As with the question of inclusion, when asked if the teachers thought the pupils' needs were being met, all of the responses were positive (table 48). The pupils did not all agree with this and only half fully agreed (table 49). Half stated that their needs were being met somewhat. All of the teachers reported that the behaviour of the pupil is manageable through the strategies employed. The strategies featured the use of specialist staff very highly although no evidence of this was seen during the observations. The opinion that the teachers feel specialist staff help to meet the needs of pupils with ASD is in agreement with how the teachers would like to see support developed as described previously. The pupil responses, however, did not mention any special staff which shows a big difference between what the teachers report to help the pupils and what the pupils believe. Most of the times when the pupils report that they need support is either arriving at school or during lesson times. This reinforces the belief in part one RCADS and SDQ findings that social times are not a main concern for the pupils. Investigating and comparing how pupils and teachers feel about how pupils with ASD's needs are being met is also a new area of research not previously undertaken.

Therefore the results and discussions from this study have brought to light that the pupils with ASD are experiencing difficulties in the contemporary English classroom and the main areas of these difficulties are panic disorder, major depression and separation anxiety. While in their classroom environment the pupils with ASD rarely interact with their teachers despite the perceived belief that the pupils are included socially and academically in school. This lack of interaction questions the reality of a differentiated and personalised educational experience described by the DfE (2015). Although anxiety appears to be an underlying difficulty for pupils with ASD, the strategies employed in classrooms are not individualised to this area. Overall only general support strategies were seen to be employed in schools with very little evidence of the use of specific strategies which have been developed for pupils with ASD. Naturally increased training in the area of specific ASD programmes would have a financial effect, however it is suggested that these are what are needed in order to address the anxiety suggested to be at the root of the difficulties experienced by pupils with ASD. It is suggested that this would also increase the confidence of teachers and improve their attitude to inclusion (as Avaramid et al., 2010 also found). In addition to their own training teachers recommend more training for teaching assistants and more support from specialised professionals in order to support them in providing a more individualised, useful approach for pupils with ASD. The role of teaching assistants has grown considerably over the previous years (Groom et al., 2005) and therefore it is unsurprising that their training needs to reflect an ever more demanding role in schools.

5.5 – Evaluation of the study – strengths and limitations

Part one - quantitative data

Figure 31 identifies the strengths and limitations of this quantitative first part of the study. Quantitative approaches are best used to answer what, when and who questions and are not well suited to how and why questions (Robson, 2013). Overall the strengths to the study were the precise data generated from the two established surveys. This allowed the results to be analysed and the results reliably generated. The main limitation was the difficulty in recruiting participants. Time was taken to

counter the limitations listed below. Although the sample size could not be made very much larger as only one researcher was undertaking the collection of data, participation rate was attempted to be improved through emails and contact with the schools and parents as described in chapter 3. A great deal of time was spent generating interest, contacting schools and parents however when considering the number of invitations which were sent out, the uptake was small. Although this did take a long time, this balance was struck as otherwise if so much time had not been committed to recruiting the number of participants would have been even smaller. It is difficult to think of any other ways in which recruitment for the study could have been approached.

Another limitation of this study was the use of the questionnaire with primary aged pupils. Although the RCADS pupil questionnaire can be used with primary pupils, some of the pupils in this study were unable to access the questions. This resulted in some of the participants being unable to join in the study. For those who did, it is difficult to gauge whether their responses were always meaningful. The pupils' responses were quickly recorded by the researcher and every opportunity was made to explain and engage with the pupils however we cannot be sure that all the children fully understood what they were being asked or that they were truthful in their responses.

Figure 31: Strengths and limitations of part one (adapted from Robson, 2011, Punch, 2005, Bryman 2008, Mangiore and van Ness, 2009)

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Part two - qualitative data

Qualitative data in part two was gathered by interviews with the teachers. Participants were interviewed following a pre-prepared interview schedule (appendix 3) which included firstly closed and then more open-ended questions. These limitations were circumvented by being mindful of their existence. Researcher bias when interviewing can feature strongly when the interviews were taking place and as a result the researcher was aware of the need to be conscious of not providing any unintentional encouragement through words or gestures. All findings were written up quickly and support with the analysis was provided by the researcher's two university supervisors, software programmes and research articles. If this study were to be repeated there would be a stronger push for the participants to be recorded. Although the participants asked were not favourable to being recorded perhaps with a further explanation some may have been persuaded. A recording would have helped with the accuracy of the written transcripts of the interviews. An alternative would have been to carry out member checking – the transcripts made from researcher's notes to be sent to participants for them to verify their accuracy.

Timing was also a limitation in the teachers' interviews. Schools are very busy places and the teachers often could not be spared from their classes for too long. This resulted in a rushed response from some teachers or indeed cover teachers sending children up to ask the class teacher how much longer they will be, creating pressure to return. Finding a suitable, quiet place in which to work was also often a difficulty. On occasion some teachers had to speak in a corridor or in the corner of a playground while the children were playing. This created apprehension that they may be overheard and this may have affected the provision of truthful answers.

Figure 32: Strengths and limitations of part two (adapted from Robson, 2013, Hayes, 1997)

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Part three – Case studies

Part three generated both quantitative and qualitative data. The data was generated through teacher and pupil interviews and by two observations per pupil. These different data sources were combined to create case studies of six pupils' provision. To mitigate as many of these limitations as possible the following strategies were employed. All the interviews took place as quickly as possible to enable the teachers to return to their classes. The teachers were asked if the observations were typical of the pupil's usual behaviour as only a snapshot of time spent in school was observed. All the teachers confirmed that this was the case. The researcher did everything she could to provide a suitable environment for the pupils to complete their questionnaire as described in chapter 3. Although the

analysis of three types of data was time consuming, the researcher planned for this and had time set aside for this purpose. The data generated allowed the research questions to be answered and the time spent on this was therefore reasonable and justified.

Again there were some issues with releasing teachers from class and finding a suitable, quiet place in which to speak. Although the problems considered regarding truthful, purposeful responses may have occurred in the case study interview with the pupils, it is felt that the pupils selected were able to speak about their own experiences clearly and reliably. Perhaps the pupils found the interview easier as the answers are their own and they do not have to interact and understand the pre-prepared responses on the RCADS questionnaire.

Figure 33: Strengths and limitations of part three overall (adapted from Fowler and Consenza, 2009, Fowler and Mangione, 1990. Loftland, Snow and Anderson, Loftland, 2006, McIntyre and Macleod, 1986, Mason, 2006, Maxwell, 1996, Hammersley, 1992, Johson and Onwueghusie, 2004, Stake, 1995, Zaimal, 2007, Creswell, 2003)

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5.6 – Implications for further research and study

After analysing the data generated from this study, some key areas have been highlighted in which further research would be beneficial. These areas will now be discussed.

Depression

Depression was highlighted as an area in which pupils with ASD were reported to experience with all of the participants, pupils, teachers and parents, agreeing that some children are experiencing difficulties in this area. This study also showed that teachers are seeing this major depression and linking it to conduct problems. This is of major concern for the pupils of ASD as conduct problems will manifest themselves as the pupil grows and could take on a much more serious role when in secondary school and adulthood. There was also found to be a link between depression and peer problems in this study. It would be beneficial therefore for research and to be undertaken within the area of major depression in pupils with ASD. Why is major depression such an issue for pupils with ASD? What can be done to support these pupils to limit or minimise these difficulties? Could support involve the families of these children as well? This is particularly pertinent as, as shown in this study, the parents strongly feel their children are struggling and need help with major depression.

Parental support

This study has highlighted the concerns parents have about their child's difficulties. Parents tended to see their children as having far more struggles in every studied area than those perceived by their child's teacher or the child themselves. As discussed earlier there may be many reasons for this however clarification on this point would help the development of support for the children. Maybe the high difficulty ratings reflects a lack of satisfaction with their children's development and therefore the parents would benefit from more support at home. Further research into the reasons for this high level of concern would be most beneficial to provide more support for parents of children with ASD through advice in how to support their children.

Addressing anxiety

From the data generated in this study it is possible to see that anxiety is being experienced by pupils with ASD in primary classrooms. Indeed both teachers and parents linked the emotional problems the pupils are experiencing to anxiety. This was also reflected in the teachers' response to the underlying problem for pupils with ASD – anxiety. Research concerning ways in which to reduce this anxiety would be most helpful as a many of the teachers believed that it is this anxiety which is causing the overall difficulties which the pupils with ASD are experiencing. Anxiety reduction strategies could be tried. With this one variable only it would be straightforward to access if any one strategy was actually helpful to the pupils in reducing their anxiety levels. Following this research it is hoped that effective ways could be found which would help to reduce the anxiety felt by pupils with ASD which appears to be a major difficulty at this present time.

Use of specialists

One finding of this study was that the teachers felt the use and frequency of specialist staff should be increased to improve the level at which pupils with ASD's needs are being met in primary schools. As there has not been any research focusing on the impact of the work of these staff, this would be an interesting and useful focus for further research and study. A review of the quality and usefulness of specialists would be a good starting point of interest for schools in whether or not this is an area in which to dedicate more of their budget. It would also be interesting to know if more regular visits and input would improve the educational experience of pupils with ASD as the class teachers suggest. The effect of specialist staff over other staff leading interventions, ie teaching assistants, has also not been explored in literature. This study highlighted the limited training which is available to school staff at different times of their careers and how unclear the best way to develop this area is at present.

5.7 – Implications for practice and policy

Teacher training resulting in improved use of strategies

This study highlighted the need for more teacher training while qualifying prior to taking up the first teaching post. The lack of training was reflected in the high level of concerns (the main concern was managing communicating with the pupil with ASD). It would be beneficial for this training to continue after qualification to include Continuing Professional Development (C.P.D.) related to teaching pupils with ASD. This study showed that there was a major lack of strategies employed in primary classrooms which are ASD specific such as the 'Attention Autism' programme. If there were a change in policy and practice that class teachers were trained in specific programmes for children with ASD it is hoped there would be a reduction in the concerns a teacher may have, and less anxiety in pupils as their needs would be better met. A change in policy and practice whereby schools are encouraged to employ specific, ASD focused strategies instead of just general primary school approaches would help to create a more individualised support system for pupils with ASD in primary schools. It is disappointing that there are ASD, or even just SEN, specific programmes and strategies available however the majority of pupils with ASD in the studied primary schools did not have any access to them.

In addition to improving knowledge of different strategies available for supporting pupils with ASD, further training may also help teachers to identify the source of certain difficulties that the pupils in their classes are experiencing and how to approach these. Teachers reported conduct problems in the pupils with ASD in their classes. It would be hoped that through further training the teachers would have a greater depth of knowledge of how typical difficulties experienced by pupils with ASD express themselves in the classroom and therefore how best to support this rather than confuse the source of the difficulties they are observing. Through teacher training the teacher would better understand the pupil and therefore be able to provide more individual, precise provision to support their needs. It is also suggested that strategies such as removing pupils from their classroom would be diminished if the teachers had more ASD specific approaches to use. If a specific programme for pupils with ASD were to be employed the frequency of these anxious moments may be reduced. A programme designed for this particular disorder rather

than the pupil with ASD being assisted with strategies which are often used with other pupils without ASD would be more individualistic in nature and it is hoped would generate better learning outcomes.

Perhaps a higher training rate and understanding would result in greater job satisfaction and contentment at work for teachers. This may provide an incentive for the teachers to stay in their schools in this period of high teacher resignations and problems with retention. As many staff and pupils concurred in this study, good pupil-adult relationships are developed through length of service, and this results in better support for the pupils with ASD.

Teaching assistant training

The rise of teaching assistants in recent years in primary schools has been found to be a direct result of attempting to include pupils with SEN in school activities. The lack of entry level qualifications would indicate that there must be a training system in place in which the strengths and abilities of teaching assistants can be grown and developed in order to fulfil the very important role they now have in primary schools. However this is not the current situation. Changes to contracts to allow for training and development to take place could be a matter of change to contemporary practice and policy. As the teaching assistants are very close to pupils with ASD it is important that they are aware of different ways in which to support them. It has been proven that the more training a teaching assistant is given, the better they are able to fulfil their role (Alborz et al., 2009). Therefore the possibility of the provision of courses and other professional development could be investigated as this time and financial investment does have good long term effects on the pupils with whom they work. Teaching assistant training may also increase morale and result in better staff retention as it may for teachers as previously mentioned.

Retention of trained staff is an area of concern as a member of staff who used to employ a strategy leaving the school featured quite highly in table 12 at 18% - 3/17. This shows the need for regular staff training and upskilling in order to more fully meet the needs of the pupils in the school especially in areas when retention of staff is a difficulty.

School environment concerning managing strategies

It would be beneficial for there to be a change in the policy and practice of how teaching approaches, strategies and support are organised and maintained for all SEN pupils in primary schools. As explored in this study there are not any systems for the reviewing or developing of strategies to support pupils with ASD. A culture of collaboration between all school staff would see this improve. This collaboration would need to take place at a whole school level including all staff, teaching and support, in order for the holistic aspect of each pupil to be considered. Perhaps these aims could be achieved by timetabled times when such an area would be given a focus. Perhaps staff meeting times could be set aside for this collaboration which could include teaching assistants if funding could be available for their retention at school for a longer day. This new approach to the practice and policy of inclusion at school level would especially help newly qualified teachers who often struggle at the start of their careers due to a lack of training in SEN and especially ASD prior to qualification. It would be especially beneficial if the student voice could be included in these collaborations concerning the reviewing, development and abandoning of strategies. The inclusion of the student voice is already being heard in some schools regarding the abandonment of some strategies (table 32 – “pupil did not like it” and it would be most beneficial to see this grow).

Specialist staff

As the main concern a large majority of teachers mentioned was the difficulty of managing the pupil’s communicational needs (the pupil understanding the teacher and the teacher knowing which type of clear language would be best to use) it is suggested that more support in this area would be helpful. Language and communication was huge concern was also reflected in the requested support discussed in 5.3.4. The frequent use of a specialist support worker, in this case Speech and Language Therapy (SALT), would assist teachers in this area. Therefore the best way to deploy staff to raise attainment is debatable and any new decisions made may have an impact on the ways in which inclusion is approached in the future, either through more specialist staff or the training of teaching assistants.

5.8 - Originality and contribution to knowledge

During my initial research surrounding my chosen area of interest concerning supporting pupils with ASD in the classroom I found very little material. Library databases searches found some research on the effects ASD has on the pupils' families but very little research on how children with ASD perceive any difficulties experienced in the classroom.

Although the number of children diagnosed with ASD continues to rise there has not been much research dedicated to the managing the difficulties that children experience. There has been a great deal of research surrounding the medical side of ASD, brain functions and so on however research concerning how children can be supported in the classroom was lacking. This study therefore focussed on this area.

There has not been up to this point a research study which combines the two measures employed here, the SDQ and the RCADS to assess the levels of difficulties experienced by primary aged pupils with ASD. Likewise there has not been any research concerning the types of strategies available in England presently or how schools review and develop these. Of the research articles found regarding possible support equipment for pupils with SEN in general there was no clear focus on equipment for children with ASD specifically. A lot of the research only lists different approaches and techniques with a heavy quantitative base. This study aimed to go further than this and use not only quantitative data but also qualitative in its aims to understand more than only what support is available. By using a mixed methods approach it was possible to find out what is the contemporary situation in primary schools. By taking this methodological approach it was hoped to gain new insight into this area of ASD provision. The use of two surveys at the start of the study, the RCADS and the SDQ, also helped to broaden the view of any difficulties pupils with ASD experience. Both surveys are well established but do not appear to be not used together within other research studies. By using the SDQ each pupil was given a broad overview of the difficulties they encounter at school and then the RCADS allowed a more in depth knowledge of the different areas of difficulty to be explored.

5.9 – Contribution to personal development

The journey to complete this thesis has been long, interesting and very rewarding. I began this journey four years ago tentatively developing an idea and research plan which has since developed into this project. Over the four years the areas of interest have been moulded and shaped, edited and abridged to the final research questions reported here in this thesis.

I came to this research from a background in teaching primary children and fresh from my Masters degree. As I had enjoyed completing the Masters degree I was sure I wanted to continue in the world of educational research and drew on my own teaching experience for a focus. As a novice in the world of research the work of Robson (2013) has been invaluable in developing my understanding of different approaches to undertaking research via a variety of methods.

At first the wide range of library features, catalogues and databases were somewhat overwhelming. Working as a distance student was also a challenge in this area as any problems or questions with resources had to be handled online through the IT support centre for downloading issues with SPSS and NVivo. I thank them for the clear guidance online without which my analysis would have ground to a halt. One major way my thinking has developed is in the presentation of results. The different ways in which to show the findings, whether in figures or tables, as part of the main text or as an appendix, has grown considerably through all the rewrites of chapter 4.

Although at the start of analysis I was not particularly enamoured with either SPSS or NVivo, with the support of my tutors, I learnt the basics and was soon inputting all the data. I surprised myself at how much I enjoyed exploring these programmes and trying out the different functions available.

Working as a distance student has brought its own challenges. It has at times been difficult as I have missed the interaction with other students and the traditional university experience of being on site and accessing resources for example physically rather than virtually. Completing this thesis off campus has taught me the importance of planning ahead especially with my tutors as I cannot just catch anyone in a corridor with a quick question. The discipline, resourcefulness and determination to complete this thesis was strengthened by the skills developed as a

distance student. A side effect of being a distance student is that I am now familiar with and have of experience of fixing Skype.

On a more personal teaching note my interaction with teachers, parents and pupils during the data collection of this study has had two positives results. By visiting other settings and observing lessons, my own teaching practice has improved. Visiting other settings is not something which is available to many teachers but actually observing other people doing the same job as yours brings many benefits. Without undertaking this research study I would not have been able to visit so many schools – infant/junior/faith based/non-faith based etc. Visiting other schools was something which teachers actually mentioned during their interviews for this study. I am very grateful to have had this opportunity. It helped me to see some good practice in action and learn from others how different difficulties can be approached.

One major difficulty I had was how to manage the school visits successfully and in general time tabling the work effectively. As the study progressed I improved at focusing participants during interviews as some were speaking for over an hour thus making the interviews a very slow and time consuming process. My resilience has also increased as panic set in when so few schools signed up to the study. The uncertain situation I found myself in – after all this planning is this study possible? – was dealt with by plodding on by inviting neighbouring boroughs etc until enough participants had been secured. Not losing hope and thinking for solutions was a strategy for coping with such uncertainty.

I have thoroughly enjoyed completing this research study.