

An Evaluation of the Effects of an Autistic Spectrum Disorder-Specific  
Post-Graduate Certificate Continuing Professional Development  
Programme on Practice in Six Schools

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### Declaration

I hereby certify that this material which I now submit for assessment on the programme of study leading to the award of doctor of philosophy is entirely my own work and has not been taken from the work of others save and to the extent that such work has been cited and acknowledged within the text of my work.

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## ABSTRACT

The aim of the research was to establish whether valued outcomes could be identified with a particular autistic spectrum disorder (ASD)-specific post-graduate certificate programme. The research investigated and compared the practice of six teachers who had participated in an ASD-specific continuing professional development (CPD) programme and four teachers who had not. A combined qualitative and quantitative case-study design was used in reviewing the literature, videoing classroom practice, conducting semi-structured interviews with class teachers, principals and other school staff. The data were interrogated through combining a specifically-constructed model for evaluating the aims, functions, impact and discrete elements of CPD with the concept of grounded theory. The acquisition of a broad theoretical knowledge of ASDs, increased teacher-confidence, awareness of the autobiographical experiences of individuals with ASDs and the development of lifelong learning, writing and research skills were identified as valued outcomes of participating in the programme. An impact on promoting the principal's management and instructional roles and employing a collaborative, inclusive whole-school approach was evident in schools where teachers had completed the programme. Bricolage and self-reflective practice also emerged as key contributing factors to teachers' knowledge. The value of access to a range of CPD models for teachers is affirmed provided that the quality of programmes is assured. The research findings suggest that while initial teacher education (ITE) would benefit from further special education input, the contribution of ITE to teachers' repertoire of pedagogical knowledge in meeting the needs of pupils with ASDs should not be underestimated. Significantly the research findings suggest the possibility of incorporating the strategies used in behavioural approaches in naturalistic classroom settings. The findings indicate that it is critical that teachers are in a position to adopt an individualised responsive ASD-pedagogy that incorporates both an understanding of the common pedagogic needs of all learners and the group-pedagogic needs of learners with ASDs. The research findings further corroborate the fact that the literature to date, has failed to yield definitive conclusions in favour of a specific intervention model for pupils with ASDs. It is suggested that an alternative approach based on isolating the effective elements of common and ASD-specific teaching approaches may be more advantageous than pursuing the quest for a specific intervention model.

# CHAPTER ONE

## INTRODUCTION AND CONTEXT

### Introduction

Individuals with autistic spectrum disorders (ASDs) experience the world in a fundamentally different and diverse way than those who do not have ASDs (Grandin, 1995; Garcia, 2007). It has been suggested that teachers must be in a position to adapt their teaching in a manner that has been described as non-intuitive in order to effect learning for pupils with ASDs (Tutt et al., 2006; Jordan, 2007a). The importance of teachers accessing ASD-specific continuing professional development (CPD) is highlighted in the literature (Department of Education and Science (DES), 2001; National Research Council, 2001a; Jones et al., 2008; Parsons et al., 2009). Identifying the precise repertoire of knowledge and skills required by teachers to successfully meet the needs of pupils with ASDs is complicated by the veritable explosion in ASD-specific teaching approaches (Heflin and Simpson, 1998a; Callahan et al., 2009). A wide range of ASD-specific CPD programmes in these approaches is available for parents and teachers. The Interactive Autism Network (IAN) was established in 2006 at the Kennedy Krieger Institute, in the United States (US), to facilitate research aimed at contributing to a greater understanding of ASDs (IAN, 2007). Initial data from parents have identified 1,030 approaches to the treatment and education of individuals with ASDs. According to IAN researchers' preliminary analysis of data, on average, families are using five different approaches simultaneously (IAN, 2007). Simpson (2005) expresses the view that children and youth with ASDs are commonly exposed to dubious intervention programmes and strategies that lack efficacy and, which have not been objectively verified. It is critical therefore that ASD-specific CPD programmes are evaluated in order to establish their effect on practice in schools. This research is concerned with evaluating the effects of a particular ASD-specific CPD programme on practice in six schools.

### A Research Rationale

As a member of the Inspectorate of the DES, I am assigned a number of specific functions under S.13 of the Education Act, 1998, which include evaluating the

quality and effectiveness of the provision of education in the State and advising the Minister on any matter related to education policy and provision, including the curriculum taught in recognised schools, assessment and teaching methods (Ireland, 1998). Both professionally and personally I have a particular interest in the education of pupils with ASDs and consider that engaging in this research is both timely and of particular relevance to both Irish and international contexts.

The absence of a research-based link between teacher preparation for special education and outcomes for teachers and pupils in Ireland and internationally is highlighted in the literature (Rhodes and Houghton-Hill, 2000; Brownell et al., 2005; Parsons et al., 2009). In Ireland, while individual CPD providers may evaluate their own CPD programmes through participant-evaluation, there is an absence of research on the subsequent effects of these programmes on practice in schools. It is envisaged that this research will contribute to mitigating this deficiency.

The timeliness of this research in the Irish context is significant due to the involvement of the courts in the education of pupils with ASDs and the government policy of expanding ASD provision. The majority of special education court actions in Ireland are now concerned with disputes related to the merits of different approaches to the learning and teaching of pupils with ASDs and the associated issue of teachers' competence (Friel, 2005; O'Brien, 2002; O'Loughlin, 2006). Ernest Cantillon, the solicitor involved in a substantial number of cases taken for parents of children with ASDs in Ireland, remarks that judicial intervention has resulted in resources being diverted from education to provide for litigation costs (O'Rourke, 2004). While recent cases have affirmed the adequacy of ASD provision, there has also been an acknowledgement that teachers require additional knowledge and skills in order to meet the needs of pupils with ASDs (*Sinnott v. Minister for Education*, 2000; 2001; *O'Carolan v. The Minister for Education and Science*, 2005; *O'Cuanacháin v. The Minister for Education and Science*, 2007; *Mc D v. Minister for Education and Science*, 2008). Mandlawitz (2002) notes that in the US, the threat of due process hearings and litigation in relation to children with ASDs is responsible for generating educational policies and practices. Ring (1997) observes that the area of educational policy is not for lawyers and the courts and instead requires systematic

planning by the executive. I concur with Ware (2001) in believing that while parents consider that they are obliged to resort to the courts, which as O'Mahoney (2006) observes, adopt an individualistic interpretive approach based on the facts of individual cases, the development of a coherent, comprehensive policy will continue to be sidetracked. In recent years, the government has adopted a policy of expanding provision for pupils with ASDs through establishing a continuum of educational placements (Hanafin, 2008). These placements range from including pupils in mainstream classes to establishing dedicated provision in special classes and special schools. Central to this policy is the employment of fully-qualified teachers who have access to additional training in ASD-specific approaches (Hanafin, 2008). The literature identifies the extent to which staff demonstrates a knowledge and understanding of the implications of ASDs for learning and teaching as a key element in educational provision for pupils with ASDs (National Research Council, 2001a; National Initiative for Autism: Screening and Assessment (NIASA), 2003; DES, 2006a; Scottish Intercollegiate Guidelines Network (SIGN), 2007). Jordan (2007b) advises that the development of teachers' knowledge and understanding is a priority and cautions that knowledge of techniques alone will lead to the disempowerment of teachers. Darling-Hammond, cited in Goldberg (2001) remarks that the single most important determinant of success for a pupil is the knowledge and skills of that pupil's teacher. Based on the literature, on my current role as an inspector and on my former roles as a mainstream class teacher for eleven years, a learning-support teacher for two years and a resource teacher of pupils with special educational needs for five years, it is critical that "understanding" is added to the central concepts identified by Darling-Hammond, as knowledge without understanding is inadequate in implementing effective learning and teaching. Reducing the involvement of the courts and the success of government policy in expanding ASD-provision is therefore related to the efficacy of the additional CPD in ASD-specific approaches that teachers access.

In recent years initial teacher education (ITE) has responded to policy changes emanating from globalisation, demographic changes, interculturalism, threats to social and family cohesion, inclusion and the influence of destructive sub-cultures (Coolahan, 2007; Loughrey, 2007). It is unreasonable and impractical to suggest that

ITE should provide teachers with the complete pre-requisite knowledge, understanding and skills to meet the learning and teaching needs of pupils with ASDs. It is essential therefore that high quality CPD programmes are available to assist teachers in cultivating their knowledge, understanding and skills in this area. The DES has expended significant resources in the development of ASD-specific CPD programmes since the Report of the Task Force on Autism highlighted the importance of the education and training of teachers, other professionals and support staff to the success of proposals on the reform of the education of children and adults with ASDs (DES, 2001; 2006a ). It is timely therefore to evaluate the effects of one such programme in order to contribute to potential future developments.

### **Research Questions**

I propose to conduct research that evaluates the effects of a post-graduate ASD-specific CPD programme delivered at St. Patrick's College, Drumcondra, Dublin on practice in six schools through investigating the approaches to learning and teaching adopted by six teachers. Adopting a whole-school perspective, learning to collaborate with peers and parents and displaying a willingness to contribute to school reforms are identified as being critical for teachers (Bransford et al., 2005). I intend therefore to examine whether a cascade effect of participating in the CPD programme can be identified through engaging both school principals and other teaching staff in the research. I will also evaluate individual teachers' practice and evidence of a cascade effect in four schools where teachers of pupils with ASDs have not participated in this ASD-specific post-graduate programme in order to establish whether particular valued outcomes associated exclusively with participating in the programme can be identified.

A range of theoretical perspectives on CPD related to the functions, aims and areas of impact of CPD was combined in formulating the research questions. Grundy and Robison (2004) suggest that CPD should serve the three principal functions of extension, renewal and growth. According to Day (1999), CPD may effect accelerative or transformative growth. The aims of CPD are identified by Logan and Sachs (1991) as advancing the competitive purposes of social and economic policy, school improvement priorities and individual growth. A typology of CPD outcomes as they



impact on teachers' motivation and attitude, knowledge, skills and practice is identified by Powell et al., 2003. The research questions will therefore seek to ascertain whether the ASD-specific CPD programme has fulfilled the functions of CPD as they apply to the aims and areas of impact of CPD.

The literature on CPD clearly demonstrates that a number of complex and interrelated factors including expertise, capability, personal and professional biography, situational, emotional and psychological factors, the heterogeneous needs of pupils and changes over time and circumstance, affect teacher effectiveness (Hargreaves, 1998; Day and Sachs, 2004). It follows that a specific CPD programme will impact differently on each individual teacher and identifying a universal truth that can be applied to all teachers will therefore be unfeasible (Guskey, 1995). Taking cognisance of the intricate, fragmented and complex nature of researching the effects of CPD, I propose to access and explore multiple sources of evidence using a range of quantitative and qualitative data-collection methods and analysis designed to avoid sharing the same methodological deficiencies (Webb et al., 1966). The organisation and structure of the thesis is designed to reflect the research rationale, research questions and progression of the research process.

### **Organisation and Structure of the Thesis**

Initially I intend to engage in a multi-faceted literature review that situates the research in a rich and embedded contextual framework related to the education of pupils with ASDs and CPD for teachers (Yin, 2003). The literature review will seek to construct a cumulative theoretical framework through developing an understanding of ASDs, tracing the historical development of ASD provision, linking the concept of special educational needs to the learning and teaching of pupils with ASDs, reviewing a range of ASD-specific group pedagogic approaches and considering the theoretical basis for CPD. Figure 1 provides a summary of the elements that will be examined in the literature review and is specifically designed to illustrate the connectivity of the identified issues. While I am commencing the literature review in October 2005, I will continue to review relevant literature throughout the process, thereby engaging in an iterative process that will continue to inform and invigorate the research. I will adopt an expansive and pragmatic

methodological approach derived from the research questions. Findings will be presented with reference to the research model for evaluating the discrete elements of CPD that will be constructed. The research questions will be addressed with reference to the framework for evaluating the aims and outcomes of CPD that emerges from the combined range of theoretical perspectives related to the functions, aims and areas of impact of CPD that have been identified. Conclusions and implications for research, policy and practice will be clearly articulated.

In Chapter Two, I will seek to develop an understanding of ASDs in order to construct a coherent framework that will inform the development of the research instruments and the research process. Literature on the evolution of understanding with regard to the characteristics, manifestations and prevalence of ASDs will initially be examined. Subsequently the application of the behavioural and psychological theoretical bases to developing an understanding of ASDs will be explored. The experiences of individuals with ASDs and their parents/carers will also be considered through presenting an autobiographical account aimed at ascertaining whether these experiences can inform practice in schools. Finally the implications of synthesising perspectives in contributing to an understanding of ASDs will be considered.

The historical development of ASD-education provision in the Republic of Ireland will be examined in Chapter Three and contextualised within the development of special education provision. The key factors in the consolidation of current provision for pupils with ASDs will be analysed and the contribution of judicial intervention and the legislature considered.

The concept of special educational needs and its link with ASDs will be explored in Chapter Four through examining special educational needs in terms of a continuum of need, education for all and an interconnected concept. The role of common, group and individual pedagogic needs and curriculum in ASD provision will be identified and the implications of an interconnected concept of special education for ASD-specific CPD programmes discussed.

An evidence-based approach to reviewing the efficacy of the predominant group-pedagogic approaches to the learning and teaching of pupils with ASDs will be adopted in Chapter Five. Behavioural, Communicative, Social Responsiveness, Interactive, Inclusion and Discrete approaches, representative of those that teachers in Ireland are familiar with, will be extensively reviewed and the claims for the effectiveness of the approaches critiqued. Based on a synthesis of the literature, future directions for approaches will be suggested.

The factors involved in evaluating programmes of CPD will be examined in Chapter Six and a framework for evaluating the aims and outcomes of CPD constructed. The development of CPD in Ireland as it particularly relates to teachers of pupils with special educational needs and pupils with ASDs will be examined.

Chapter Seven will detail the research methodology and approach that is to be adopted. A research model for evaluating the discrete elements of CPD will be constructed in order to assess the impact of CPD at six levels related to the antecedent level, appropriateness of content and process in meeting participants' needs, cognitive, affective and behavioural learning, organisational support and change, participants' use of new knowledge and skills and pupils' on-task behaviour. Epistemological perspectives and ethical considerations will be clearly articulated and their potential to influence the research acknowledged.

The research findings will be discussed in Chapters Eight and Nine with reference to the research model constructed for evaluating the discrete elements of CPD. Findings that emerge outside this model will also be discussed. Chapter Eight will provide a summary of the research findings, details of the research population and contexts and an examination of antecedent factors that can be identified as contributing to participants' choice of CPD programme. Findings in relation to the appropriateness of the content and process of the CPD programme in meeting participants' needs, cognitive, affective and behavioural learning, organisational support and change, participants' use of new knowledge and skills, pupils' on-task behaviour and additional emerging issues will be presented in Chapter Nine.

The relevance of the findings to the research questions will be considered in Chapter Ten through applying the evaluation framework related to the functions, aims and areas of impact of CPD. A set of conclusions and implications for future research, policy and practice will be elucidated with reference to the research model for evaluating the discrete elements of CPD.

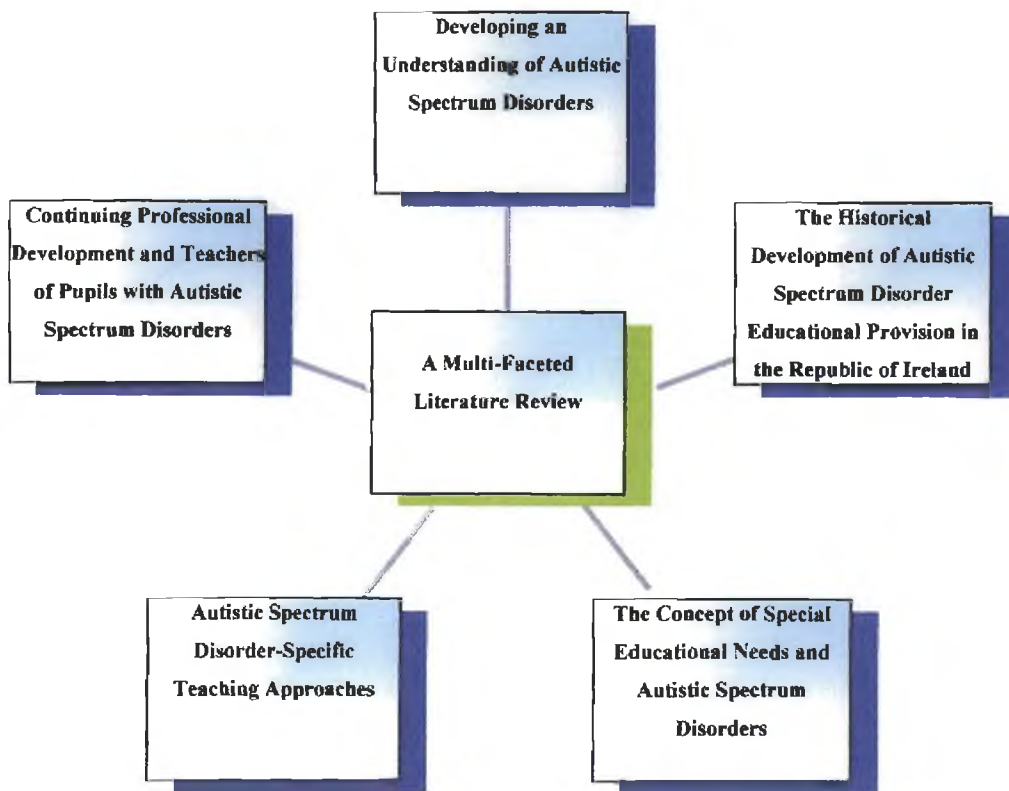


Figure 1. A Multi-Faceted Literature Review

### Conclusion

Recent developments in ASD provision and the absence of research on the effects of ASD-specific CPD programmes on practice in schools suggest that this research is both timely and relevant. A clear rationale has been established for the research, pertinent research questions identified and an outline of the structure and organisation of the thesis provided. Each chapter will be presented with a clear introduction outlining the content and structure of the chapter and its relationship to the structure of the thesis. A short concluding paragraph will summarise the key points of each chapter and signal the subsequent areas for discussion.

**CHAPTER TWO**  
**LITERATURE REVIEW ONE**  
**DEVELOPING AN UNDERSTANDING OF AUTISTIC SPECTRUM**  
**DISORDERS**

**Introduction**

This chapter aims to develop a comprehensive understanding of ASDs through reviewing a range of literature related to the evolution of the concept of ASDs, and the contribution of behavioural, psychological and autobiographical theoretical perspectives to this understanding. Finally the implications of synthesising these perspectives will be considered. The framework that emerges from this chapter will be used to inform the development of the research instruments and the research process in order to ensure that they are informed by a wide-ranging knowledge and appreciation of ASDs.

**Autistic Spectrum Disorders**

The origin of the expression autism/autistic is attributed to Bleuler, a psychiatrist, who in 1911, coined the term from the Greek word “autos” meaning “self” to describe a basic disturbance in schizophrenia, which led the individual to withdraw from relationships with people and the outside world (McKeon, 2005). Kanner, a child psychiatrist, working in the US, discovered a cluster of deficits related to interpersonal development, communication and imagination from a study of eleven children that he identified as a separate and distinct condition. In his seminal paper entitled “Autistic Disturbances of Affective Contact”, Kanner stated that, “since 1938, there has come to our attention a number of children whose conditions differ so markedly and uniquely from anything reported so far...” (Kanner, 1943, p. 217). Kanner further suggested that among the group of children there were very few warm-hearted parents. This led to the development of the now discredited psychogenic theory that the genesis of the disorder was linked to deficient early parental relations particularly that of a lack of attachment or bonding occurring with the child’s mother (Bettleheim, 1967). Wing and Gould (1979) conducted an extensive epidemiological study in the London borough of Camberwell and identified a triad of impairments associated with a diagnosis of autism as impairments of social

interaction, communication and imagination. The term “continuum of impairments” (p.111) was used by Wing (1991) to explain the findings from research and clinical work. Wing (1996) later adopted the term “autistic spectrum” to allow for a broader interpretation of a diagnosis of autism based on the triad of impairments (Wing, 1996).

A contemporary of Kanner, Asperger, a paediatrician working in Vienna, identified a number of boys who experienced difficulties in social interaction, the social use of language, the ability to understand gesture and facial expression and engaged in repetitive, fixated and stereotypical behaviours. Asperger presented his findings in a paper entitled “Autistic Psychopathy in Childhood” in 1944 (Frith, 1991). While Kanner’s research was widely known internationally, Asperger’s contribution was less familiar until the 1980s when it was translated into English and referred to by Wing (1991). Wing adopted the neutral term Asperger syndrome to avoid the tendency of equating psychopathy with sociopathic behaviour and included the syndrome with a wider group of conditions that had in common, impairment of development of social interaction, communication and imagination. This condition is interchangeably referred to in the literature as Asperger or Asperger’s syndrome. For the purpose of this research, the latter term will be used. Asperger believed that individuals with Asperger’s syndrome (AS) were of high intelligence. Wing argued however that it was possible to find individuals exhibiting features of the syndrome with other than normal or high intelligence. Howlin (1998) points out that though AS is often described in terms of a “mild” variant of autism, the symptoms are just as pervasive and devastating as those exhibited by children described as less able cognitively. Based on the current availability of research, the legitimacy of conceptualising AS as a unique syndrome, separate from high-functioning autism has not been validated or refuted (Macintosh and Dissanayake, 2004).

The issue of terminology is being re-considered and terms such as autism spectrum difference, autistic spectrum condition and autism spectrum disorders are being suggested (Rammler, 2007; Jones et al., 2008; Brighton and Hove City Council, 2009; National Autistic Society (NAS), 2009). I concur with Jones et al. that some label is needed in order to provide for the allocation of effective support for all

individuals. A consensus in relation to labelling is best sought in consultation with the individuals and their families. Personally I have concerns with the use of the terms “disorder” and “condition” as I consider that both have medical associations not appropriate in educational contexts. However in order to reflect the literature in the area to date and in accordance with the practice adopted by the Report of the Task Force on Autism, the term autistic spectrum disorders (ASDs) is used in this research to denote disorders exhibited by children with Autistic Disorder, children with Asperger’s syndrome and children with Pervasive Developmental Disorder-Not Otherwise Specified (PDD-NOS) (DES, 2001). There are two main classification systems used in making an initial diagnosis of ASDs. These systems are “The International Statistical Classification of Diseases and Related Health Problems, Tenth Revision, (ICD-10)” and “The Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition, Text Revision, (DSM-IV-TR)” (World Health Organisation, 1994; American Psychiatric Association, 2000). Both classification systems concur with Wing (1996) in adopting a view of autism as a spectrum of autistic conditions that are disorders of development and not psychoses. These classification systems are detailed at Appendix A.

Reports on prevalence rates for ASDs vary. The Task Force on Autism reports a prevalence rate of fifty-six per 10,000 of the general population (DES, 2001). The NAS (2002) estimates that one in every 110 people in the United Kingdom (UK) is affected by Autism or AS. Wallis (2006) reports a prevalence rate of one in every 166 American children. Kalb (2008) notes that according to the Center for Disease Control (CDC) and prevention in the US, one in 150 children is affected. Boys are more likely to be affected than girls with a ratio of two to four boys to each girl being identified (Baron-Cohen and Bolton, 1993; Frith, 1997). The prevalence of parent-reported ASD diagnosis among children aged three to seventeen in the US was estimated from the 2007 National Survey of Children’s Health, which had a sample size of 78,037 (Kogan et al., 2009). Prevalence was identified as one in ninety one, including one in fifty-eight for boys. However claims of an autism epidemic are unsubstantiated and require close examination of a number of factors that can be identified as contributing to the reported increase in diagnosis (Lilienfeld and Arkowitz, 2007; Kogan et al.). Recent data published by the CDC in the US suggests

that between one in eighty and one in two-hundred and forty children, with an average prevalence rate of one in 110 have an ASD. This suggests a prevalence rate of about one percent (CDC, 2009). Howlin (2002) points out that greater awareness of children with ASDs at all cognitive levels has contributed to recent statistics as to date, research has failed to demonstrate a “true” increase in the prevalence of ASD. Lilienfeld and Arkowitz partly attribute the increase in the prevalence of ASDs to the broadening of the diagnostic criteria for ASDs in the DSM-IV, which requires individuals to meet any eight of sixteen criteria in lieu of heretofore being required to meet six of six criteria. The authors also observe that where the DSM-III contained only two diagnoses relevant to ASDs, the DSM-IV contains five such diagnoses. Research conducted by Shattuck (2006) concluded that the increase in ASD diagnosis in the US in the period from 1994 to 2003 coincided with a decrease in the rates of diagnoses of mental retardation and general learning disabilities. This has recently been corroborated by research, which re-assessed thirty-five individuals, aged fifteen to thirty-one years, initially diagnosed with either specific or pragmatic language impairment as children and found almost one-third would now be classified as having ASDs (Bishop et al. 2008). While Howlin (2008) acknowledges the methodological issues related to group size and reliance on retrospective parental reports in this research, she observes that the study strengthens the arguments against the view that the incidence of ASDs has increased over recent decades and that the role of changing diagnostic criteria requires further investigation. Grinker (2007) points to the lack of precise interpretation among all researchers and clinicians with regard to describing the actual physical and behavioural manifestations of ASDs and advises that the diagnostic field is in the early stages of development only. Kogan et al. suggest that the more inclusive survey questions, increased population awareness and improved screening and identification may partly explain the findings of their research study.

The Report of the Task Force on Autism describes autistic disorder as being identified by a triad of impairments in social interaction, patterns of communication and flexibility of thought and imagination (DES, 2001). Claiborne Park (1982) refers to her daughter Jessica, a child with ASD, producing thousands of consecutive pictures, which portrayed her life experiences in terms of a curious, repetitive yet



attractive universe. In later years Claiborne Park informs us that Jessica's creativity developed to the point where she created nearly abstract design elements infused with surreal intensity through the sense of colour and form she possessed before she could speak. See Appendix B for a selection of paintings by Jessica Park with accompanying explanations by Jessica of each piece, which I propose suggest that we should exercise caution in asserting that individuals with ASDs have impaired imaginations. Rather I consider that as educators, it behoves us to develop the imaginative capabilities of all pupils including pupils with ASDs. I concur with Jordan (2007b) in challenging the view that individuals with ASDs have deficient imaginations and instead define the final segment of the triad as inflexibility of thought and behaviour. It has been suggested that an added dimension related to sensory perception might also be added to the triad (Autism Working Group, 2002a; Jones, 2002a; Bogdashina, 2003; 2006). The presence and interaction of these characteristics affects the manner in which individuals with ASDs interact with and understand the world and have associated implications for the planning, implementation and evaluation of learning and teaching programmes.

### **Theoretical Bases for Autistic Spectrum Disorders**

The greater availability of knowledge related to the theoretical bases for ASDs has led to rival claims for therapeutic and educational interventions, which can lead to confusion for parents and teachers (Trevorthen et al., 1998). Advances have been made in relation to the impact of anatomy, chemistry and the development of the brain, genetic and molecular-biological theories and hormonal and digestion abnormalities (Trevorthen et al.; Wallis, 2006; Williams, 2006a; Heffernan, 2007). Research is also currently being conducted to establish pre-natal testing for ASDs (Knight, 2009). I do not propose to review the literature in relation to these areas as the focus of this research study is on developing a behavioural and psychological perspective of ASDs as it relates to teachers' professional practice rather than a biological one. Peeters (2003) cautions that a diagnosis of ASDs is based on the presence of a triad of specific behaviours that are purposeful compensatory reactions caused by some underlying fundamental impairments rather than the primary features of ASDs. Peeters concludes that while these behavioural characteristics are useful, they fail to inform us as to why individuals with ASDs exhibit these behaviours and

how they experience their world. Powell and Jordan (1997) assert that it is essential that a conceptual framework of ASDs is informed by perspectives that both acknowledge the overt manifestations of behaviour and the underlying psychological bases. Powell and Jordan argue that at the root of our beliefs about the education of those with ASDs should lie a respect for the way in which individuals with ASDs think and learn. Accounts of autism are predominantly compiled by experts from the outside looking in rather than from the perspective of individuals with ASDs (Clare, 1993). I believe that the inclusion of the experiences of those with ASDs is critical in research that seeks to develop a knowledge and understanding of the education of pupils with ASDs. This corresponds with the belief of Porter and Lacey (2005) that including the voices of those who have the most difficulty expressing their views in the research agenda is essential. While I will not be directly researching the views of individuals with ASDs as an element of this research, I propose instead to explore the theoretical bases of ASDs from the viewpoints of individuals with ASDs. A combination of behavioural, psychological and experiential perspectives will therefore be explored and used to inform the development of the research instruments and subsequent data gathering and analysis.

### **Behavioural Perspectives of Autistic Spectrum Disorders**

Jones (2002b) contends that the nature of the social difficulties associated with ASDs is probably the most defining and potentially disabling feature of the disorder. Jones points out that while differences will be evident between individuals' levels of social impairment, the social development of all individuals will not be commensurate with their general ability. Social impairments include an apparent aloofness and unresponsiveness to other people, treating people or parts of people as inanimate objects, a lack of awareness of cultural norms or social perceptiveness, absence of empathy with the feelings of others, atypical use of eye-contact and an unawareness of the concept of shared attention, which leads to joint referencing (Baron-Cohen and Bolton, 1993). Social impairments associated with ASDs manifest themselves in individuals exhibiting a preference for solitary activities, being more adult than peer oriented, demonstrating a poor understanding of social rules, being unable to seek comfort at times of distress and an absence of a desire to investigate or

explore unless it is directly related to a restricted personal interest (Plimley and Bowen, 2006). Individuals with ASDs are less influenced by what others think of their behaviour and therefore have no regard for socially-imposed consequences (Jones). Grandin, an adult with ASD, articulates the need for individuals with ASDs to receive direct instruction to enable them to survive what she terms “the social jungle” (Grandin, 1995, p. 93).

Language and communication are so closely bound together in normal development that it is difficult for parents to understand that in children with ASDs, both develop independently from each other (Jordan, 2001). Jordan observes in fact that speech may become a barrier to communication for some children with ASDs, where the child talks incessantly or uses speech as a form of self-stimulation, leaving little opportunity for communication to take place. Communicative impairments are characterised by an absence of meaningful communicative intent (Baron-Cohen and Bolton, 1993; Jordan and Powell, 1995). Hodgdon (1999) describes communicative intent in terms of the use of some type of movement or vocalisation with the express purpose of getting the attention or response of another person and persisting until the desired goal is accomplished. Jones (2002b) suggests that for communication to occur there must be something to communicate about, something to communicate with, something to communicate for and someone to communicate with.

Communication differences experienced by children with ASDs have been identified as including difficulties in interpreting verbal and non-verbal expressions and gestures, confusion with the semantic and pragmatic aspects of language, tendencies towards echolalic speech patterns, confusion with metaphorical language, pronouns and neologisms, an inability to respond spontaneously and limited conversation repertoires (Baron-Cohen and Bolton; Jordan and Powell; Welton, 2004; Plimley and Bowen, 2006). Addressing these areas is therefore critical when devising communication programmes for children with ASDs.

Children with ASDs exhibit rigid thought and behaviour patterns, which may lead to obsessional behaviours, repetitive interests and ritualistic play (Beyer and

Gammeltoft, 2000; Jones, 2002a). Sensory and perceptual impairments can lead to an under or over sensitivity to noise, smell, taste, light, touch or movement, fine/gross motor difficulties, poor organisational skills and difficulties in managing the time and sequence of activities (Autism Working Group, 2002a; Jordan, 2001; Bogdashina, 2006). Children with ASDs may also have atypical sleep and behaviour patterns (Autism Working Group). Rogers and Ozonoff (2005) reviewed forty-eight empirical papers and twenty-seven theoretical/conceptual papers in order to establish the relationship between sensory sensitivities and ASDs. The authors concluded that while sensory symptoms were more frequent and prominent in children with ASDs than in typically-developing children, there was insufficient evidence that these symptoms differentiated ASDs from other developmental disorders.

Epilepsy, visual impairment, hearing loss, cerebral palsy, Fragile-X syndrome and Tourette's syndrome may also co-exist with ASDs (Jones, 2002b). The Report of the Special Education Review Committee (SERC Report) observed that some seventy-five per cent of children with ASDs are within the range of general learning disability on intelligence tests (Ireland, 1993). Peeters (1997) noted that sixty per cent of persons with ASDs register with an intelligent quotient (IQ) under fifty. However these rates were accepted when prevalence rates were believed to be 4.9 out of 10,000 children for typical autism and 21.2 for a broader definition of impaired reciprocal social interaction (Wing and Gould, 1979; Bowler, 2007). Bowler estimates that the shift to a broader spectrum conceptualisation of autism reduces the proportion of individuals with ASDs and general learning disability to about twenty-five per cent. It is also acknowledged that due to the nature of ASDs, securing a valid cognitive assessment of a child's particular level of cognitive functioning is difficult (DES, 2001; Bowler). However it is clear from recent literature that the severity of ASDs and a general learning disability form two separate dimensions, which must be considered when planning programmes for individual children (Peeters; Jordan, 2001; Autism Working Group; O'Brien and Pearson, 2004; Brooks, 2006).

## **Psychological Perspectives of Autistic Spectrum Disorders**

A number of cognitive models of primary deficit in autism have emerged that seek to provide an explanatory framework for the manner in which individuals with ASDs experience the world. Rogers and Ozonoff (2005) identify models involving theory of mind, affective dysfunction and executive deficits as providing the main impetus for current neuropsychological research.

### *Theory of Mind*

Baron-Cohen et al. (1985) suggest that the triad of behavioural impairments associated with ASDs stems from an impairment in an innate ability to understand that both themselves and others possess independent internal mental states, which enable one to reflect on, explain and predict behaviour. This ability is referred to in terms of possessing a theory of mind (ToM) that allows us to imagine or represent states of mind that we or others might hold (Baron-Cohen et al.; Baron-Cohen, 1995). Baron-Cohen et al. sought to demonstrate ToM through a study where twenty children with ASDs were shown two dolls, Sally and Anne. The child watches as Sally places a marble in a basket and walks out, Anne removes the marble and places it in a box during Sally's absence. The child is asked where Sally will look for the marble on her return and eighty per cent of children with ASDs failed to appreciate Sally's false belief through replying that Sally would look in the box for the marble. This deficit is linked to the concept of shared attention whereby typically-developing children point to something to share their interest whereas children with ASDs point to an object only because they want it (Frith, 1997). Pretend play is also related to the lack of ToM, which is used to explain why children with ASDs cannot understand pretence and do not engage in pretend play routines (Frith). Frith observes that due to the lack of a mechanism for ToM, children with ASDs fail to acquire more sophisticated social and communicative skills that enable them to become adept at the complex aspects of human communication such as reading between the lines, humour and irony. Jordan (1999a) considers that it is not simply that individuals with ASDs do not understand what others are thinking and feeling but that others are thinking and feeling.

Happé (1994a) conducted research, which required individuals with ASDs to attribute appropriate mental-state explanations to characters in vignettes compiled to

demonstrate lies, white lies, joke, pretend, misunderstanding, persuasion, appearance/reality, figure of speech, sarcasm, forgetfulness, double-bluff and contrary emotions. Individuals with ASDs were impaired at providing appropriate explanations for the characters' non-literal utterances, compared to typically-developing individuals and those with general learning disabilities. Performance on the stories was closely related to performance on standard ToM tests, but even those who passed all ToM tests showed impairments on the more naturalistic story materials relative to typically-developing adult controls. This research was replicated by Jolliffe and Baron-Cohen (1999), who found that relative to typically-developing controls who were IQ and age-matched, individuals with ASDs performed less well on the strange story tasks, while performing normally on a non-mentalist control task. Individuals with ASDs did provide mental-state answers, but exhibited difficulty in providing contextually appropriate mental-state answers. Jolliffe and Baron-Cohen concluded that while the research clearly identified deficits in individuals with ASDs, the deficits may be attributable to ToM reasons or central coherence reasons or both. Happé (1994b) observes that a minority of children with ASDs will pass ToM tests and therefore the theory cannot be applied universally to all individuals with ASDs. Frith (1997) notes that ToM is unable to account for all aspects of ASDs, such as stereotyped behaviour and the desire for sameness or the exceptional talents of some individuals with ASDs. Shaked and Yirmiya (2004) conducted a meta-analysis of studies addressing the ToM hypothesis, which revealed that the ToM deficit is not unique to ASD, while acknowledging that individuals with ASDs may be more severely affected. Shaked and Yirmiya found the chronological and mental age of the participants and the matching procedures employed by researchers to be significant moderator variables in ToM research. Research has also demonstrated ToM deficits in deaf children who are raised by hearing parents in a non-signing environment (Peterson and Siegal, 1999; Peterson et al., 2005; Peterson and Slaughter, 2006). However research with 145 children with deafness, ASDs or typically-developing, aged three to thirteen years, indicated that while all groups followed the same sequence in ToM development, participants with ASDs demonstrated atypical patterns and sequences of understanding through more adeptly construing hidden emotions than false beliefs (Peterson et al.). The authors suggest that the successful participants with ASDs may have chiselled out rote solutions to

emotional situations, thereby bypassing the necessity for understanding false belief through using alternative cognitive heuristics to identify hidden emotions.

Research findings related to the development of ToM in individuals have proven to be a crucial step in beginning to enhance our understanding of the social and communication deficits experienced by individuals with ASDs. However ToM alone cannot account for the diverse responses of individuals with ASDs evident in the research nor comprehensively explain repetitive behaviours and thus ASD cannot be equated with this single underlying cognitive deficit (Turner, 1999).

### *Affective Dysfunction*

Several theorists have expressed concern that defining ASDs in terms of a deficit in theory of mind underestimates the basic nature of the autistic breakdown of social ability (Happé, 1994b). Hobson (1993) concurs with Kanner (1943) in suggesting that children with ASDs have an innate inability to form affective contact with others. Children with ASDs do not readily experience inter-subjective engagement with others, which isolates them from a co-referenced world. Hobson (2002) maintains that affectively patterned personal relatedness is constitutive of an individual's understanding of the nature of persons and minds and concludes that ASDs are primarily affective and interpersonal impairments. Due to these impairments, children with ASDs do not engage in the necessary social experiences in infancy through which typically-developing children develop cognitive structures for social understanding. Based on the hypothesis related to the restricted social awareness associated with ASDs, Lee and Hobson (2006) investigated the drawings of a group of fourteen children and adolescents with ASDs and a control group with general learning disabilities matched for chronological and verbal mental age. Participants with ASDs drew mostly human figures that were barely distinguishable from each other, but introduced clear contrasts among houses, whereas most of the control group drew distinctive human figures and houses. The authors tentatively suggested that the research findings may indicate how interpersonal engagement and identification serve to enrich and elaborate a child's awareness of and attitudes towards different kinds of persons and the child's own self.

Hobson (1986a; 1986b) conducted early research into emotional appraisal, which demonstrated that children with ASDs experience difficulty in matching facial to bodily or to vocal expressions of emotion. Specific face processing deficits experienced by individuals with ASDs have been highlighted in a number of studies. Celani et al. (1999) found in a study of ten children with ASDs, ten children with Down syndrome and ten typically-developing children matched for verbal mental age that children with ASDs displayed a specific difficulty in the recognition of facial expression of emotions. Research has demonstrated that both children and adults with ASDs were as able as controls to name point-light displays of non-human objects and human actions but were significantly poorer at labelling emotional displays (Moore et al., 1997; Hubert et al., 2007). The authors suggest that this research illustrates a specific impairment in attending to emotional states.

Research in affective dysfunction provides a possible explanation in relation to why social and communicative difficulties develop in individuals with ASDs. However it has not been clearly demonstrated that repetitive behaviour and interests can be equated with a response to an incomprehensible world and the variable affective responses of individuals with ASDs also require further investigation (Bowler, 2007; Turner, 1999).

### *Executive Deficits*

Happé and Frith (2006) proposed that individuals with ASDs experience weak central coherence (WCC), which manifests itself in a preference for segmental over holistic information processing. The theory attributes the behavioural phenomena of ASDs to higher-level processes and attempts to explain both the deficits and enhanced performance of individuals with ASDs on specific tasks (Bowler, 2007). Happé (1999) suggests that WCC may affect perceptual, visuo-spatial, visuo-constructive and semantic processing. Gross (2005) observes that individuals with ASDs are less inclined to perceive faces as organised and meaningful wholes and focus instead on specific regions or features of the face for social information. The cognitive style of individuals with ASDs is described as exhibiting a preference for processing local rather than global features of the environment, which can lead to a focus on insignificant details and a failure to take the wider context or meaning into account (Mottron et al., 2003; Turner, 1999). Deruelle et al. (2004) conducted



research with eleven children with ASDs, aged from 4.5 to 13.1 years, and two control groups of typically-developing children matched on verbal, mental, and chronological age, which confirmed that facial identities are recognised through local rather than global processing mechanisms in children with ASDs. Happé and Frith (2006) attribute the ability of individuals with ASDs to connect certain information, such as the elements of their daily routines, to item-to-item processing rather than global processing and refute suggestions that this ability conflicts with the theory of WCC. However, Mottron et al. found typical performance in local and global processing tasks in research with twelve high-functioning adolescents with ASDs, which suggests that the theory of WCC requires more detailed examination.

Executive function (EF) has been described as the ability to maintain an appropriate problem-solving set in order to engage in goal-directed behaviour (Welsh and Pennington, 1988). The EF hypothesis proposes that individuals with ASDs have deficit in EFs such as planning, working memory, impulse control, regulation of behaviour, organisation and initiation and monitoring of action (Frith, 1997; Ozonoff and Jensen, 1999). Ozonoff and Jensen suggest that deficient EFs may be the primary cognitive deficits of ASDs. Executive functions begin to develop in early infancy and make a compelling theory for a neurological disorder with deficits that appear within the first three years of a child's life (Griffith et al. 1999). Gilotty et al. (2002) point to the close relationship between executive functioning and social functioning and observe that a typical social exchange involves the fluid evaluation of subtle, multifaceted and constantly evolving information. The authors conducted research with thirty-five children with ASDs that demonstrated a clear relationship between EFs, as manifested through everyday behaviour, and adaptive behaviour in children, aged six to seventeen years, with ASDs. The research also highlighted the significance of initiation as an executive ability and its connection with adaptive behaviour. Criticisms of the value of research in the area of EF being concentrated in laboratory-experimental contexts rather than naturalistic contexts were rebutted by Ruble and Scott (2002). The authors demonstrated that children with ASDs typically display some of the deficits in EF that have also been seen in laboratory-experimental studies, such as less ability than their age peers to carry out goal-directed behaviour over time, less resistance to distraction, and less complex behaviour.

Research has clearly identified an association between EF and ASDs. However the variety of responses of individuals with ASDs identified in the research and the inability of the theory to account for the range of repetitive behaviours suggests that the model of deficits in EF does not provide a satisfactory explanation for all of the features of ASDs (Turner, 1999; Happé and Frith, 2006).

### ***Psychological Perspectives of Autistic Spectrum Disorders: Conclusion***

A parsimonious approach based on the search for a single cognitive account aimed at explaining the triad of impairments is evident in the literature related to the psychological perspectives of ASDs. Autistic spectrum disorder emerges as a complex disorder that almost certainly arises from a variety of combinations of causal pathways (South et al., 2007). Theory of mind, affective dysfunction and executive deficits should not be considered as competing and mutually exclusive phenomena. Hughes (2002) identifies the robust association shown in numerous studies between EF performance and performance on tests of ToM ability as one of the most powerful influences upon current research in cognitive accounts of ASDs. Abandoning the search for an exclusive cause may have the constructive effect of abandoning the quest for a single cure or intervention and refocus research on the discrete elements of the triad of impairments and the heterogeneity of individuals with ASDs (Happé et al., 2006).

### **The Voices of Individuals with Autistic Spectrum Disorders**

The development of a comprehensive theory of ASDs should be based on a collaborative and evolving venture, in partnership with the affected individuals themselves (Williams, 1993; Trevarthen et al., 1998). Research conducted by Jones et al. (2008) recommended that researchers, policy makers and education staff should know more about how to effectively consult with children and young people with ASDs. A need was highlighted for practitioners to ensure pupils with ASDs are engaged in decision-making and planning during the secondary phase of education and post-school placements. While it was acknowledged that staff and parents may act as advocates for some pupils, it was stressed that priority should be given to eliciting pupils' views directly. Through listening to the voices of individuals with ASDs and their carers, a range of issues emerges that has implications for the

learning and teaching programmes of pupils with ASDs. Figure 2. below provides a summary of the issues that emerge from an examination of the autobiographical literature of individuals with ASDs. However it is critical to remember that the experiences of one individual with ASD may not be directly applicable to another and therefore personal accounts should be interpreted and applied in accordance with the identified needs of each individual. It is important also to consider Boucher's (1996) caution that the personal accounts of individuals with ASDs, while representative of the essence of what it feels like to have an ASD, cannot be considered to comprehensively represent what a significant number of individuals with ASDs, who also have a general learning disability, experience.

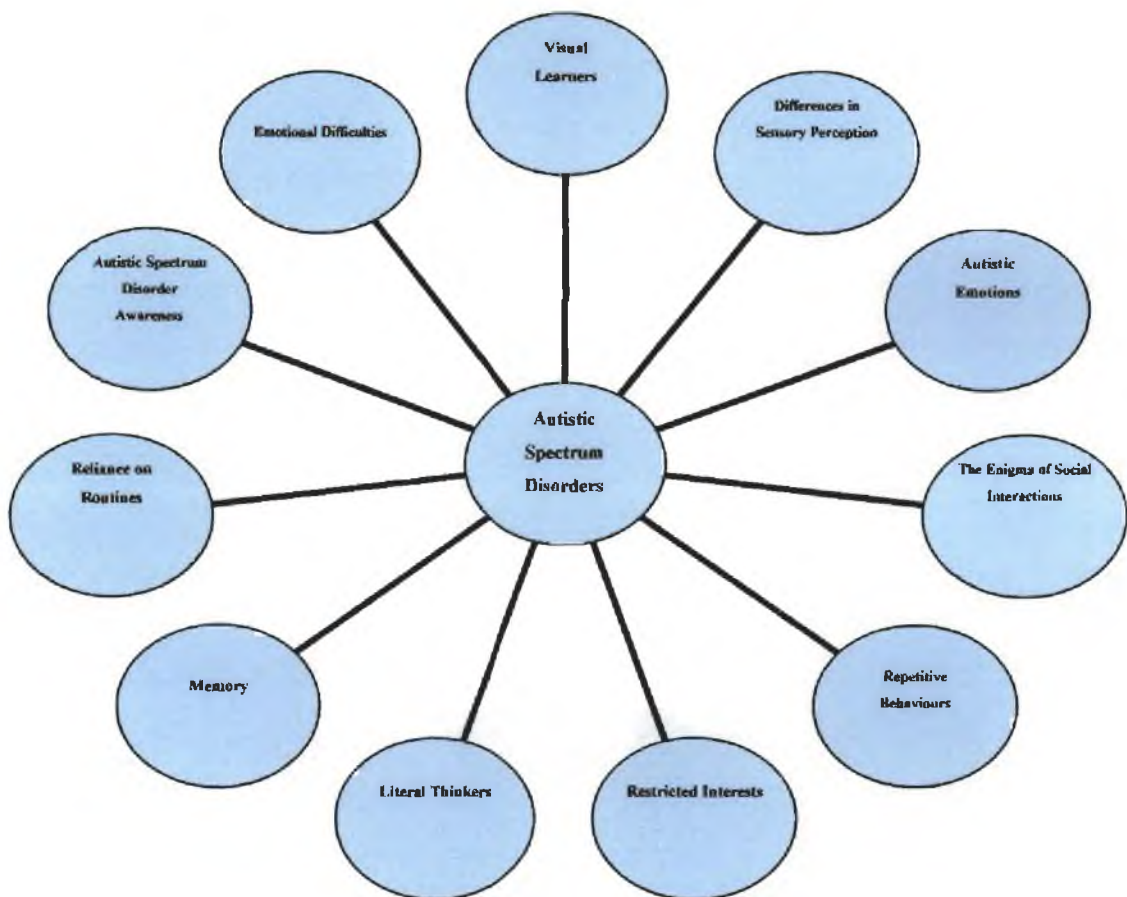


Figure 2. Autistic Spectrum Disorders: An Insider's View

### *Visual Learners*

As children develop, they become less reliant on visual information for learning and teachers rely less on visual and more on verbal methods in their teaching (White and

Worth, 2006). However for children with complex needs, the development of language, as a basis for organising, analysing and storing information is deficient, hence these children continue to rely more heavily on visual learning modes (Porter and Ashdown, 2002). White and Worth advise that while the cognitively more able pupils with ASDs may appear to cope well, they will need visual support throughout their lives in order for them to fulfil their potential. This is confirmed by the views expressed by individuals with ASDs. Grandin (1995) states that she thinks in pictures and that words are as a second language to her. She explains that the pictures stored in her memory are always specific and that in contrast to typically-developing individuals, her thoughts move from specific images to generalisations and concepts. Williams (1993) describes being able to read words but having difficulty assimilating the meaning of what she has read. Grandin refers to experiencing difficulty with spatial words such as “over” and “under” and requiring a visual cue to fix them in her memory. Gerland (1996) points out that words had no meaning for her unless she could visualise them. Grandin described learning about Science through visits to the museum, experiments and field-trips and recounted that the more she worked with cattle and operated equipment, the stronger her visual memories became.

It is logical to suggest therefore that the strong visual learning modality of individuals with ASDs should be reconciled with the auditorily-based environment of classrooms in order to optimise pupils’ learning (Hodgdon, 1995). Strategies such as the use of concrete materials, active and experiential learning, visual methods and materials and the purposeful organisation of the physical environment should correspond with the learning style of pupils with ASDs. Research conducted by White and Worth (2006) with eighteen children with ASDs suggests that a strong visual learning modality has potentially positive and negative implications in the teaching of reading. The authors identified significant discrepancies between children’s technical reading skills (word recognition, reading speed and accuracy) and children’s reading comprehension and listening comprehension skills. The authors suggest employing strategies such as using a story sack of real objects linked to the text, constructing mind-maps, writing key words for the lesson on the blackboard, reinforcing verbal information with visual information whenever possible and making the meaning of what is read explicit. Rebuses are stylised pictures representing objects, actions and attributes and

may be used as a transitional step in the reading process provided this is developed as part of an augmentative system to be used while developing an ability to read the printed word (Porter and Ashdown, 2002; Van Oosterom and Devereux, 1985). Grandin notes that it is much easier for her to understand written text that describes something that can be easily translated into pictures, which suggests that the use of a language experience approach to reading may be beneficial for children with ASDs. Related to the visual learning modality of individuals with ASDs may be an artistic ability. The intense visualisation skills of individuals with ASDs can lead to the creation of drawings that are particularly detailed. Grandin (1995) describes her teachers as fostering and encouraging her artistic creativity through providing visual arts opportunities. Dorricott (2006) recounts successfully using a drawing technique to enable a teenager with ASD to communicate his sense of self and communicate his feelings. I suggest therefore that the curriculum area of Visual Arts has the potential to contribute to pupils' development through utilising the visual learning strengths associated with ASDs (National Council for Curriculum and Assessment (NCCA), 1999). Learning through computers and multi-media is also useful for individuals with ASDs as it removes the distraction of coping with the teacher and promotes visual learning (Williams, 1993). This is corroborated by Murray (1997) who observes that computers have features, which distinctively appeal to individuals with ASDs. Murray describes computers as rule-governed and predictable, having clear-cut boundaries, being context-free, enabling safe-error making, providing possibilities for non-verbal or verbal expression and starting from where the child is. Wall (2004) suggests that computers can be used to support development across all skill areas but cautions against overuse due to the solitary nature of the activity.

### *Differences in Sensory Perception*

All our experience of the world comes through our visual, auditory, tactile, gustatory and olfactory senses and shapes the course of cognitive, language, emotional and social development (Bogdashina, 2006). Many individuals with ASDs report having difficulties with filtering irrelevant sensory information and exhibiting an inability to experience wholes without full attention to the constituent parts (Kanner, 1943; Sainsbury, 2000; Bogdashina). Bogdashina describes this as a strong drive to coherence and gestalt perception, which may occur in any sensory modality and lead to sensory overload. The needs of resistant eaters with ASDs have been linked to

behavioural, physical and sensory origins (Ernsperger and Stegen-Hanson. 2004). Williams (1993) refers to being able to use only one sensory channel at a time when experiencing sensory overload. Many individuals report that the telephone is their preferred way of socialising as it requires them to attend to auditory stimuli only (Grandin, 1995). Sainsbury describes spending most of the school day perilously close to sensory overload. Waller (2007) refers to experiencing extreme sensitivity to physical stimuli such as taste, touch and sound, which she suggests accounts for her reluctance to try new foods, wear particular fabrics next to her skin or tolerate the noise of a vacuum cleaner. Individuals with severe sensory problems sometimes engage in self-injurious behaviour such as biting themselves or hitting their heads, often unknown to themselves (Grandin, 1995). The inability of individuals with ASDs to process incoming information rapidly may result in individuals with ASDs finding large gatherings overwhelming and cause tantrums. This has implications for the management of children with ASDs during recess periods and particularly noisy curricular experiences. In Appendix C, Aston (2006), a seven-year old child with ASD illustrates in a poem the conscious effort he has to expend in listening to the teacher. Williams also cautions against the typical interpretation of laughter in individuals with ASDs as it can mean enjoyment, understanding, fear or constitute a delayed response to a literal visualisation of something said at another time. Laughter can also indicate sensory overload triggered by the speaker, at which point the speaker's words are reduced to a meaningless hum for the listener. Addressing the underlying causes of the sensory differences of individuals with ASDs has the potential to lead to a reduction in undesirable behaviours (Grandin; Bogdashina, 2003). The differences in the visual, auditory and tactile processing of individuals with ASDs have particular significance for learning and teaching contexts.

### ***Differences in Visual Processing***

Some individuals with ASDs experience significant difficulties with visual processing and sight may be their most unreliable sense (Williams, 1993; Grandin). Depth-perception may be impaired and individuals can become very disturbed when going up or down steps. A child who persistently flicks fingers in front of the eyes may have a visual processing problem (Grandin). Grandin refers to individuals with ASDs experiencing a continuum of sensory abnormalities and points out that while

almost half of young children with ASDs respond to gently intrusive programmes in which they are constantly encouraged to look at the teacher and interact, others will find this approach confusing and possibly painful. Some of the difficulties related to maintaining eye-contact may stem from an intolerance for the movement of the other's eyes (Grandin). Williams recounts that maintaining eye-contact with a friend generated the frightening feeling of losing oneself. Jackson (2002), a thirteen-year-old boy with ASD, describes maintaining eye-contact as particularly uncomfortable and simultaneously engaging in listening and looking as very onerous. Fluorescent lighting can cause severe problems for individuals with ASDs as they can see a sixty-cycle flicker and problems can range from excessive eye-strain to seeing a room pulsate on and off (Williams; Grandin). William and Hanke (2007) elicited the views of fifteen pupils with ASDs aged six to fourteen in mainstream schools with regard to their ideal school. Access to natural light, classrooms with adequate space and comfortable furniture were cited as important. Some individuals with ASDs may be sensitive to regular household electricity (Grandin). Grandin suggests that distorted visual images may explain why individuals with ASDs favour peripheral vision as they may receive more reliable information when they look out of the corners of their eyes.

### ***Differences in Auditory Processing***

Boucher (1996) refers to individuals with ASDs experiencing the auditory environment as a cacophony of undifferentiated sounds, which causes them to attempt to shut off the auditory channel by covering their ears or by diverting their concentration through rocking or spinning activities. Barrett (2006), an eleven-year old pupil with ASD, describes experiencing his classmates' voices as dynamite in his ears. Some children with ASDs have been taught to sing before they can speak (Grandin, 1995). The author suggests that it is possible that the rhythm helps to stabilise auditory processing and block out intruding sounds, which may explain why some children with ASDs use commercial jingles as attempts to communicate. Echolalia, where children repeat what they hear, has been related to sensory processing difficulties, resulting in a sufficient amount of recognisable speech filtering through that enables the child to be able to repeat words (Grandin). Grandin advises that teachers need to speak slowly to accommodate a nervous system that

processes auditory information slowly and sudden movements that may cause sensory confusion are to be avoided. The more predictable and calm the teacher's voice is the less emotional fear it creates (Williams, 1993). However Williams cautions that a balance must be found between predictability and unpredictability for individual children, as while a predictable voice engenders trust, it may also enable the child to tune out, while an unpredictable voice secures a child's attention, it may also create a psychological barrier of distrust, which causes the child to irretrievably withdraw.

### ***Differences in Tactile Processing***

One of the first signs that a baby may be autistic is that it stiffens up and resists being held and cuddled. Grandin (1995) describes being hugged as experiencing an engulfing tidal wave of stimulation, which is both overwhelming and unpleasant and advises that many individuals with ASDs cannot tolerate being touched. Williams (1993) affirms that she didn't like anyone coming too close and felt that all touching was pain. She explains that it is much easier for a person with ASDs to tolerate touch if he or she initiates the process, as it provides time for the person to process the information. Conversely individuals with ASDs may crave pressure and children are often observed to choose to crawl under mattresses, wrap themselves up in blankets or wedge themselves in tight places (Grandin). Many individuals with ASDs will eat only certain foods and are unable to tolerate the texture, smell, taste or sound of food in their mouth (Williams; Jackson, 2002).

Differences in sensory perception reported by individuals with ASDs should be monitored and accommodated by teachers (Williams, 1993; Grandin, 1995). Elliott et al. (1994) examined the effects of antecedent exercise conditions on maladaptive and stereotypical behaviours of adults with ASDs and found that antecedent vigorous aerobic exercise impacted positively on the successful completion of subsequent vocational tasks. This suggests that pupils with ASDs can benefit from the curriculum area of Physical Education (PE) (NCCA, 1999). Porter and Ashdown (2002) caution that access to multi-sensory environments should not be used as time-out areas, contingent on the undesirable behaviour occurring, but rather as an unthreatening environment for exploration and investigation, where the pupil can



access alternative forms of stimulation through positive interaction. Stephenson (2002) points to the uncritical presentation of the purported benefits of the use of multisensory environments in the literature, which necessitates careful consideration of their use.

### *Autistic Emotions*

Grandin (1995) disputes the assertion that individuals with ASDs do not have emotions and argues that they have qualitatively different emotions. She compares the feeling of happiness more to an intellectual satisfaction than an emotional experience. This is consolidated by Williams (1993) who describes being particularly attached to her grandparents, father and aunt. She describes communicating with those close to her through objects that she found pleasurable such as her grandmother's knitted clothes and camphor and her grandfather's liquid mercury balls. Grandin describes her emotions as simpler than those of most people and considers that she understands simple emotions such as fear, anger, happiness and sadness. She explains that complex emotional relationships are beyond her comprehension and that she does not read subtle emotional cues. Grandin recalls being upset on the death of her aunt but becoming even more distraught when she discovered her aunt's ranch was for sale. She identifies this with an emotional bonding to routines and objects. During a particularly difficult period in her life, Williams attests to being struck by the kindness of the women at her workplace who brought extra food for her, which she describes as eating gratefully with tears rolling down her cheeks. At puberty, Grandin refers to her life as being governed by fear and found teasing from her peers very painful and changes in school schedules as engendering intense anxiety and fear of a panic attack. Fear is an emotion reported by a number of individuals with ASDs and for some it starts earlier than adolescence (Sellin, 1993; Williams; Grandin; Sainsbury, 2000).

Williams (1993) describes responding positively to a particular teacher that taught her in the final year of primary school whom she states accommodated each child's ability and accepted that there were no wrong answers. The role of a psychiatrist in Williams' recovery demonstrates the importance of building relationships with individuals with ASDs that are based on trust, understanding and respect. The desirability of having smiling, happy and friendly school staff and having a

knowledge of each pupil was referred to in a study by William and Hanke (2007) where the views of fifteen pupils with regard to school were elicited. Jackson (2002) refers to being a victim of bullying during his school years. He describes experiencing physical and verbal abuse from his non-ASD peers, which caused him to be annoyed, upset, hurt and aggravated. Gerland (1996) observes that the difference between play and bullying was not apparent to her.

School systems tend to focus on academic success and relegate social, emotional and life-skills areas, which are critical for pupils with ASDs to a secondary position (Dorricott, 2006). Curricular programmes can assist pupils in analysing and discovering their own emotions through strategies such as social stories and drawing techniques (Gray and Garand, 1993; Gray and Leigh-White, 2002; Jackson, 2002; Dorricott). The curriculum area of Social, Personal and Health Education (SPHE) provides many opportunities to foster pupils' development in this area (NCCA, 1999).

### *The Enigma of Social Interaction*

Bogdashina (2006) suggests that individuals with ASDs exhibit a strong desire to be with other people, to express themselves and to be understood. However the lack of understanding of most people's social contexts often causes them to say or do something that violates what is considered to be acceptable social behaviour (Jackson, 2002). Sainsbury (2000) recalls that it was as if everyone was playing a complicated game from which she was excluded. Grandin (1995) identifies a need for mentors to explain to individuals with ASDs what she terms "the ways of the world"(p. 101) and explains that it makes it easier to untangle the complex web of social interactions when one learns that other people's actual thinking processes are different. She suggests that video-cameras and tape recorders can be used effectively in teaching social interactions. Williams (1993) refers to not knowing how to play with other children and disliking sport and taking part in team games. She describes being able to create very simple games and sometimes allowing others to participate on her terms. Williams poignantly recalls having no friends at school and spending weeks asking everyone if they were her friend. She eventually gave up and spent recess periods in a corner of the school yard alone. Williams reports suffering from a period of depression for up to a year following this episode.

Interventions that utilise “circle of friends” approaches through adopting a systematic approach to promoting interaction between children with ASDs and their non-ASD peers have been successful in improving group participation and relationships (Whitaker et al., 1998). Social interaction skills can be developed and promoted in the implementation of the Primary School Curriculum and in particular through the curricular areas of Language, SPHE, Drama and PE (NCCA, 1999).

### ***Repetitive Behaviours***

Grandin (1995) describes engaging in rocking and spinning as calming mechanisms to shut out the world and reduce sensory overload. Williams (1993) states that she engaged in rocking, hand-shaking, head-banging, flicking objects and chin-tapping as a means of decreasing built-up inner anxiety and tension and decreasing fear. These perseverative behaviours may be manifested when the child engages in inappropriate behaviour during play such as spinning the wheel of the car instead of driving it around the floor. Williams (1993) equates her behaviours of blinking compulsively and switching lights on and off as an attempt to slow things down and make them seem more detached and less frightening. The clicking sound of the lights also provided a patterned and predictable sensation. Repetitively dropping objects and jumping created a sense of an escape to freedom for Williams. Jumping also provided a means of getting one’s whole body into a rhythm as with rocking. The responses of individuals with ASDs that are considered unusual or bizarre emerge as normal responses caused by different sensory processing mechanisms (Bogdashina, 2006).

It is important to establish the cause of the behaviour rather than trying to eliminate the manifestation of the behaviour as the cause will then not have been addressed (Hodgdon, 1999). Jackson (2002) advises that parents or teachers should consider channelling a fixation in another direction only if it is clear that the fixation is dangerous to the child or others, otherwise the child should be allowed to engage in the behaviour in a controlled manner. Grandin (2002) advises that the best way to deal with fixations is to use them to motivate school work.

### ***Restricted Interests***

Individuals with ASDs describe talking incessantly about a topic of interest to them regardless of whether they are being listened to or not (Williams, 1993; Jackson, 2002). Sacks (1995a) refers to the extraordinary passion and understanding for cattle, which consume Temple Grandin. Grandin (1995) criticises the professional who tried to stamp out her fixations instead of using them to stimulate learning through incorporating them as part of the learning objectives and as task reinforcers. She considers the deep connection she feels with animals as a constant in her life. Gerland (1996) cites cranes as one of her great passions and being able to accept new places provided it was possible to see cranes, which provided at least one safe and familiar starting point. Kanner (1971) advised that the path to success for some individuals with ASDs was to channel their fixations into careers and thus it may also be a pathway to achieve some social life and friends. Being familiar with pupils' interests is particularly important as praise and social-based rewards or encouragements are less powerful motivators for pupils with ASDs (Murray, 1997; Dockrell and Messer, 1999).

One of the diagnostic criteria of ASDs is a lack of imagination, which is linked to individuals engaging in repetitive activities. Bogdashina (2003) observes that many individuals with ASDs disagree with this criterion. Individuals with ASDs possess abilities to write poetry and prose, compose music and invent equipment (Williams, 1993; Grandin, 1995; Aston, 2006; Nazeer, 2006). A more precise definition of impairments in imagination is that the imagination of individuals with ASDs is qualitatively different rather than lacking (Bogdashina).

### ***Literal Thinkers***

Individuals with ASDs experience difficulties with the pragmatics of language and experience confusion and stress with figurative expression (Grandin, 1995; Dockrell and Messer, 1999; Jackson, 2002; Welton, 2004). Grandin describes her difficulty in grasping abstract concepts. She devised a system of converting abstract ideas into pictures of symbolic images, such as, peace as a dove, an Indian peace pipe or a visual recording of the signing of a peace agreement. Grandin cautions that in more severe cases of ASDs, symbols are harder to understand and often appear to be totally unrelated to the things they represent. Grandin also acknowledges the challenges

inherent in decoding and making sense of the symbols used by individuals with ASDs. Adopting a clear and unambiguous language of instruction during curricular activities and exercising vigilance in interpreting the language used by individuals with ASDs should contribute to mitigating these difficulties.

### ***Memory***

Bogdashina (2003) describes the main characteristics of the memory of individuals with ASDs as gestalt and literalness. Sacks (1995b) observes that this tends to result in individuals being unable to disconnect scene, time, content and context in their minds, which in turn leads to difficulty in extracting relevant features from particular memories in order to build a general sense and memory. Many individuals with ASDs store their memories in vivid visual, auditory, olfactory, gustatory and tactile formats and exhibit an excellent facility with rote memory (Willey, 1999). Recalling an experience therefore produces the sensation of real experiences, which if experienced as unpleasant may generate a general sense of unease and fear for the individual (Bogdashina).

Many individuals with ASDs do not have automatic access to their vast memory store and are therefore unable to recall memories unless they are cued or prompted by associative stimuli (Bogdashina, 2003). Jordan and Powell (1995) consider that the difficulty experienced by individuals with ASDs in experiencing the self as part of an event leads to a difficulty in developing personal memories. Jordan and Powell advise that individuals with ASDs need to be prompted with specific cues in order to develop a personal memory bank. An awareness of this is important for teachers when they are seeking to elicit pupils' prior learning experiences.

### ***Reliance on Routines***

Individuals with ASDs experience difficulty with transitions and change (Grandin, 1995). Grandin describes developing a coping skill of rehearsing the transition through actively walking through an actual gate, door or window. Williams (1993) recounts the experience of receiving a reprimand in relation to writing graffiti on Parliament House during a school excursion and ten minutes later writing graffiti on the school wall. Williams states that she had not ignored the reprimand but that to her writing graffiti on the school wall was not analogous with what she had been

reprimanded for. Gerland (1996) refers to preferring pre-arranged presents to surprises, which caused her anxiety.

Bogdashina (2006) suggests that at the conceptual level, gestalt perception leads to rigidity of thinking and difficulties in generalising. She points out that children with ASDs can complete the exact same task, in the same context with the same prompts but fail to apply the skill if anything in the environment, routine or prompt has been slightly changed. Williams (1993) highlights the importance of routine and remarks that the constant change of most things never seem to give her any chance to prepare herself for them. It is important therefore that transitions are clearly signalled during the school day and that many opportunities for generalisation of learning are provided.

### *Autistic Spectrum Disorder Awareness*

Bogdashina (2006) points out that establishing communication and understanding between two people with different perceptions and experiences involves developing a common language. Grandin (1995) describes her mother attending the mainstream kindergarten on the day before she enrolled to explain to the other children that they needed to help her. Grandin states that this prevented teasing and created a better learning environment. Jackson (2002) highlights the importance of fostering an awareness of ASDs among non-ASD peers. The experiences of individuals with ASDs suggest that developing ASD-awareness among school staff and pupils has the potential to improve the experiences of individuals with ASDs.

### *Emotional Difficulties*

The challenge of coping with the stresses of ASDs creates a higher risk of emotional disorders such as depression and anxiety, which often begin in the teenage years (Wing, 1981; Sainsbury, 2000; Jones, 2002b). Puberty may compound the problems of individuals with ASDs due to the hormones of adolescence further sensitising and inflaming an over-aroused nervous system (Grandin, 1995; Jackson, 2002). Bledsoe et al. (2003) point out that adolescents with AS may be perceived by others as socially awkward, emotionally impaired, self-centred, unable to understand non-verbal social cues, inflexible and lacking in understanding.

Grandin (1995) describes not being able to participate in the social interactions of high school life and believing that electronics and experimental psychology were much more intriguing than clothes or jewellery. Personal relationships may be based on intellectual rather than sexual attraction (Williams, 1993; Grandin). Grandin also refers to an inability to recognise social signs of trouble and the associated danger of being deceived. Williams states that sexuality disturbed her and describes being extremely naïve and believing all she was told. Awareness of these issues in implementing the SPHE curriculum is therefore essential (NCCA, 1999).

### **A Combination of Perspectives**

It is suggested that the development of a comprehensive understanding of ASDs is reliant on synthesising behavioural, psychological and autobiographical perspectives and acknowledging that the triad of impairments emerges as having a range of different underlying theoretical explanations or combination of explanations that manifest themselves differently for each individual (Williams, 2006b). The literature reviewed in this chapter clearly demonstrates the potential of each of these perspectives to contribute positively to the education of pupils with ASDs. Mediating learning and teaching programmes through an understanding of the social, communicative, rigidity of thought and behaviours and sensory differences associated with ASDs emerges as being fundamental to teachers' practice. Exploring the psychological perspectives related to theory of mind, affective dysfunction and executive deficits can potentially contribute to a greater understanding of the learning styles of pupils with ASDs. This understanding can be further enhanced through considering the experiences of individuals with ASDs related to visual learning, sensory perception, emotional experiences, social interactions, repetitive behaviours, restricted interests, literal thinking, memory characteristics, reliance on routines and ASD-awareness. The finding is commensurate with the views of Donnellan and Leary (2006) who suggest that development can no longer be conceived in terms of following a "normal" or "abnormal" course but rather that experiences at every level of environmental, intrapersonal and interpersonal interaction contribute to the diversity of human uniqueness. The authors advocate a heuristic approach to ASDs that incorporates the contribution of every conceptual, scientific and theoretical position.

## **Conclusion**

Evidence from a behavioural, psychological and autobiographical perspective highlights the criticality of understanding the implications for the learning and teaching of pupils with ASDs in terms of both a triad of impairments and a triad of differences. Having developed a comprehensive understanding of ASDs in this chapter, the next chapter explores the historical development of educational provision for pupils with ASDs in the Republic of Ireland.



**CHAPTER THREE**  
**LITERATURE REVIEW TWO**  
**THE HISTORICAL DEVELOPMENT OF EDUCATIONAL PROVISION**  
**FOR PUPILS WITH AUTISTIC SPECTRUM DISORDERS IN THE**  
**REPUBLIC OF IRELAND**

**Introduction**

Educational provision for pupils with ASDs in the Republic of Ireland, while clearly influenced by international developments, is also characterised by factors distinctively related to the Irish educational context. The understanding of ASDs explored in the previous chapter should be contextualised within the historical background that is considered in this chapter. The development of educational provision for pupils with ASDs in the Republic of Ireland is examined through tracing the development of provision for pupils with special educational needs, considering the key factors in the consolidation of current provision for pupils with ASDs, providing an overview of current ASD provision and examining the contributions of judicial intervention and the legislature.

**Tracing the Development of Provision for Pupils with Special Educational  
Needs**

A national system of education for the poorer classes was introduced in Ireland in 1831 through the commitment of an annual parliamentary grant that was administered by the Commissioners of National Education, based in Dublin (O'Donovan, 1992). O'Donovan points out that a letter from Edward Stanley, Chief Secretary for Ireland, to the Duke of Leinster set out the basis on which the system was to be established. Reference was made to the need for grant aid to be provided for the erection of schools, the establishment of an Inspectorate, teachers' gratuities, the creation of a model school in Dublin, teacher training and the production of suitable schoolbooks. There was no reference to special education provision in the documents related to the setting up of the national system of education.

The SERC Report traces the beginnings of special education provision back to the middle of the nineteenth century, when facilities were established to cater for those

with sensory impairments (Ireland, 1993). However this provision was not recognised by the State as a form of special schooling until the 1950s. At the foundation of the Irish Free State in 1922, there were few facilities, educational or otherwise for pupils with special educational needs (McGee, 1990). Griffin and Shevlin (2007) observe that at that time there were only eight institutions, all charitable, private and voluntary, dedicated to providing for individuals with special educational needs. Following the Irish Civil War in 1922, Ireland underwent a cultural implosion during which conformity and compliance to existing societal values were promoted by both Church and State (Akenson, 1975). The newly established Department of Education had limited financial resources at its disposal and its priorities were concerned more with the revival of the Irish language and the amalgamation of small rural schools than with provision for pupils with special educational needs (Durcan, 1972; Coolahan, 1981; Kitchin and Mulcahy, 1999; Griffin and Shevlin). In the absence of State intervention, religious orders pioneered the growth of special education facilities from the 1920s (Byrne, 1979; McDonnell, 1992). International developments, the influence of teachers' unions, increased public awareness, parental demands, and professional interest contributed to a turning point in the development of special education in Ireland in the 1950s (McGee; McDonnell). McGee observes that during the 1950s and 1960s, voluntary groups began to establish special schools and classes throughout the country, which were subsequently recognised by the Department of Education. This effectively confirmed segregated special schooling as the appropriate model of provision for pupils with special educational needs (McDonnell, 2003). Schools for the mentally handicapped were recognised by the Department of Education in 1955 and provided with a pupil:teacher ratio of 20:1 (O'Cuilleain, 1968). A Diploma programme for Teachers of Mentally and Physically Handicapped Children was established in 1960 at St. Patrick's College, Drumcondra, Dublin (Hughes, 2000).

A Commission of Inquiry on Mental Handicap was established by the Government in 1960 to examine provision (Department of Health, 1965). The Commission endorsed a system of segregated schooling, which according to McGee (1990) was commensurate with both the prevailing zeitgeist and the perceived incapacity of mainstream schools to respond effectively to the needs of pupils with special

educational needs. Significant expansion in the provision of education for pupils with special educational needs followed the publication of the Commission's report (DES, 2007a). On the recommendation of the Commission, special schools were established initially for pupils with mild or moderate general learning disabilities and were subsequently extended to cater for pupils in a range of other categories of special educational need. These special schools were designated as special national schools and were regulated according to the Rules for National Schools (Department of Education, 1965). Special classes were also established in mainstream primary and some post-primary schools in areas where it was not practicable to set up a special school (DES). The establishment of a Diagnostic, Assessment and Advisory Service consisting of general teams and school teams was recommended. The latter recommendation however was never implemented. It can be argued that official recognition of the value of an advisory support service for schools was not substantiated until the establishment of the Special Education Support Service (SESS) in 2003 (SESS, 2005). McGee (2004) observes that while the report acknowledged the educational potential of pupils with moderate general learning disabilities, it did not challenge the prevailing view of the ineducability of individuals with severe to profound general learning disabilities. This view seems to have continued to be adopted by the State until the High Court case of *O'Donoghue v. The Minister for Health* (1993) in which the educability of all children, irrespective of how limited their capacities was affirmed (O'Halloran, 2000; O'Mahoney, 2006).

In Britain, the Report of the Committee of Enquiry into the Education of Handicapped Children and Young People, published in 1978, proposed a range of innovative recommendations for future special education provision (Great Britain, 1978). The committee was chaired by Baroness Warnock and subsequently became known as the Warnock Report. A legislative framework encompassing a new conceptual framework eschewing categorisation, endorsing individual needs, promoting integration in mainstream education and consisting of a continuum of provision to meet a continuum of special educational need was advocated. Early intervention, provision for young people over sixteen years, the establishment of a special education advisory and support service, teacher training and research and development were highlighted as priorities for government.

Hegarty (1993) observes that in the 1970s, the integration movement was finding expression in legislation in many countries including, Italy, Denmark and the US. In Ireland, a series of reports began to issue from the 1980s, which reflect a discernible concern to provide teachers with the requisite skills to meet the needs of pupils with special educational needs. The observations in these reports are indicative of pioneering and progressive views, which continue to have relevance today. The lack of a considered official response to these reports at the time may have contributed to the subsequent initiation of special education-related litigation, which has been a prominent feature of special education provision (O'Mahoney, 2006; Griffin and Shevlin, 2007). A Report on the Education of Physically Handicapped Children recommended that courses at pre-service and in-service teacher education both at primary and post-primary levels be put in place for pupils with physical disabilities (Ireland, 1981). A Report on the Education and Training of Severely and Profoundly Mentally Handicapped Children in Ireland recommended that each child should have access to an individualised programme and that personnel should be trained in methodologies such as task analysis, the writing of behavioural objectives, evaluation of programmes and behaviour modification (Ireland, 1983). The authors of the Report articulated the policy of the Government as being to integrate as many handicapped children as possible in ordinary schools but recommended that the education and training needs of severely and profoundly mentally handicapped children could not be met in the foreseeable future, by attendance in ordinary schools. The influence of the Warnock Report on these reports is apparent (Great Britain, 1978). However Ireland did not emulate the official response in Britain, which enshrined a substantial number of the Warnock Report's proposals in the Education Act, 1981 (Great Britain, 1981). Griffin and Shevlin observe that the national system of education established in Ireland in 1831 and operationalised through government circulars and regulations was essentially retained up to the Education Act, 1998.

### **Consolidation of Current Provision for Pupils with Autistic Spectrum Disorders**

A number of key factors can be identified as contributing to the consolidation of current provision for pupils with ASDs. These factors include the SERC Report, International Policies and Trends, The Report of the Commission on the Status of

People with Disabilities and The Report of The Task Force on Autism (Ireland, 1993; Department of Equality and Law Reform, 1996; DES, 2001).

### **The Report of the Special Education Review Committee**

A Committee was established by the Minister for Education in 1991 to report and make recommendations on educational provision for children with special educational needs (Ireland, 1993). The terms of reference of the Committee included identification and assessment, appropriate provision for individual children, the range of support services required and the linkages that should exist with other Departments of State. The SERC Report was published in 1993 and continues to provide a basis for the policy and practice of the DES in relation to the education of all pupils with special educational needs (DES, 2007a). The SERC Report proposed seven principles, which continue to be instrumental in the development of special education provision in Ireland. These principles affirm the right of all children with special educational needs to an individualised and appropriate education, acknowledge the important role of parents, provide for the availability of a continuum of education provision, create a presumption in favour of affording pupils access to their local mainstream schools and articulate the need for the provision of adequate services and resources to achieve these principles.

Griffin and Shevlin (2007) observe that the SERC Report adopts a relatively broad definition of pupils with special educational needs, who are described as

...all those whose disabilities and/or circumstances prevent or hinder them from benefitting adequately from the education, which is normally provided for pupils of the same age, or for whom the education which can generally be provided in the ordinary classroom is not sufficiently challenging (Ireland, 1993, p.18).

Special education is similarly referred to in broad terms as, “designed to cater for pupils with special educational needs, and is additional to or different from the provision which is generally made in ordinary classes for pupils of the same age” (Ireland, 1993, p.18). The definition includes the needs of exceptionally able children

and focuses on both within-child deficits and socio-economic factors. Griffin and Shevlin point out that in contrast to the Warnock Report, which abolished the traditional categories of disability, the SERC Report retained a categorical approach to educational provision (Great Britain, 1978; Ireland, 1998). This categorical approach which continues to prevail today and has been further enshrined in recent legislation (Ireland, 2004; DES, 2005a). A categorical system enables government departments to administer and organise provision in a convenient manner and confines the allocation of additional resources to pupils within defined categories of special educational need. However, it can also be argued that such an approach creates an undue emphasis on a medical model of disability and an associated inherent expectation of the availability of a “cure”. The DES has sought to mitigate this association in the case of pupils with specific learning difficulty and pupils with borderline/mild general learning disability through the establishment of the general allocation model (GAM) (DES). The GAM provides for additional teaching resources to be allocated to primary schools for these pupils without the requirement for an external assessment and places the focus on school-based inclusive interventions. However the categorical system for eliciting resources based on the medical model of disability continues to apply to pupils with ASDs. ASD is classified as a low incidence disability and attracts additional teaching and/or care support (DES). This I believe has particular resonance where “normal functioning” or “autistic recovery” as a result of particular behavioural interventions are referred to both in research and media reports (Lovaas, 1987; Gresham and MacMillan, 1997; Gernsbacher, 2003; Leader et al., 2008). Such is the attraction of this analysis that it continues to be supported by media, parents and researchers despite recent findings that a causal relationship cannot be established between a particular programme of intensive behavioural intervention and the achievement of “normal functioning” (SIGN, 2007). The continued adherence to a predominantly medical model of disability generates the associated suggestion of the existence of a “cure”. I suggest that this may potentially contribute to the difficulties identified by Simpson (2005) of separating fact from fantasy and merging evidence-based practice and policy in the education of pupils with ASDs as the possibility of a “cure” provides a tangible and appealing concept for the media, parents and some researchers to advocate for.

The SERC Report recognised childhood autism as one of the most severe developmental disorders affecting children and advocated that a continuum of provision from mainstream to special schooling be available to meet the needs of pupils with ASDs (Ireland, 1993). Identification and intervention early during the pre-school period were cited as a first priority, with such services being provided either directly by the Health Boards or through grant-aided voluntary agencies. It was recommended that, where such enrolment was considered to be most appropriate, pupils with ASDs should continue to be enrolled in special schools for pupils with emotional and behavioural disorders and in special schools for pupils with general learning disabilities. It was further recommended that a teacher and one special needs assistant (SNA) should be sanctioned in respect of every six pupils and that additional teaching support be provided for pupils enrolled in mainstream schools. The report advised that the pervasiveness and degree of severity of the autistic symptoms, the level of intelligence and language development should be considered when identifying the most suitable educational placement for pupils with ASDs. While insufficient specialist training for teachers was identified as a concern in the report, there was no reference to the necessity of ASD-specific teaching approaches in meeting the needs of pupils with ASDs. This was an issue that would be a matter for judicial intervention seven years later in *Sinnott v. Minister for Education* (2000) and again fourteen years later in *O'Cuunacháin v. The Minister for Education and Science* (2007).

### **International Policies and Trends**

International policies and trends contributed significantly to the consolidation of special education provision in Ireland (Gash et al., 1996; Hughes, 2000; DES, 2007a). Ireland was a signatory to the United Nations (UN) Convention on the Rights of the Child in 1990, which it subsequently ratified in 1992 (Children's Rights Alliance, 1998). Quinn (2000) observes that Article 23 is of particular importance in that it marked the first time that the rights of persons with disabilities to education, training and healthcare were explicitly referred to by a UN human rights treaty. In 1990 Ireland subscribed to a European Community (EC) declaration to pursue a policy of integration (EC Council of Ministers of Education, 1990). The SERC Report further endorsed this view, but considered that the demographic exigencies

and the prevalence of widely dispersed smaller schools, necessitated that a network of designated mainstream schools should be developed with specialist facilities, staffing and support services rather than developing such provision in all schools (Ireland, 1993). However this recommendation was to be rejected by parents, individuals with disabilities and government policy in favour of providing access for all pupils to their local school, irrespective of location (Costello, 1997; Department of Equality and Law Reform, 1996). It is particularly noteworthy that the government press release, announcing automatic entitlement to provision for all pupils with special educational needs irrespective of geographical location, specifically referred to children with autism (DES, 1998). In future, following the full commencement of the Education for Persons with Special Educational Needs (EPSEN) Act, 2004, it is suggested that this concept of automatic entitlement to education in a pupil's local school may be challenged through the statutory power invested in the National Council for Special Education (NCSE) to designate the school, which the child with special educational needs is to attend (Ireland, 2004).

In 1994, Ireland was one of ninety-two governments and twenty-five international organisations subscribing to the Salamanca Statement, which asserted that access to mainstream schools must be provided for all pupils with special educational needs (United Nations Educational, Scientific and Cultural Organisation (UNESCO), 1994). It was stated that mainstream schools with an inclusive orientation were the most effective means of combating discriminatory attitudes, creating welcoming communities, building inclusive societies and achieving education for all. A Framework for Action was adopted informed by the guiding principle that mainstream schools should accommodate all pupils regardless of their physical, intellectual, social, emotional, linguistic or other condition. The principles enshrined in the Salamanca Statement were further endorsed by the Council of Europe's Political Declaration in 2003 and its Action Plan in 2006 (Council of Europe, 2003; 2006). The Council of Europe (2007) adopted a resolution on the education and social inclusion of children and young people with ASDs, which emphasises the need for co-ordinated action and coherent policies at national level. It is expressly stated that inclusion is dependent on the recognition that persons with ASDs present specific needs that are qualitatively different from other special educational needs and



require specific understanding and approaches to meet them. It is advocated that member states support wide-ranging early and accessible identification and diagnosis, individual assessment, public awareness and training for parents and the professionals concerned. Ireland has signed and ratified the European Convention for the Protection of Human Rights and Fundamental Freedoms (1950) and the European Social Charter (revised) of 1996, which together govern discrimination, education and the education of people with disabilities (Council of Europe; 1950; 1996; Autism Europe, 2006). Ireland is also a signatory to the UN Convention on the Rights of Persons with Disabilities, which commenced in May 2008. Article 24 recognises the rights of individuals with disabilities to education and asserts that all States Parties shall ensure, inter alia, an inclusive education system and lifelong learning directed to the development by persons with disabilities of their personality, talents and creativity as well as their mental and physical abilities to their fullest potential (UN, 2008). Article 24 S(4) explicitly refers to States Parties taking appropriate measures to train professionals and staff and that such training shall include disability awareness and the use of appropriate augmentative and alternative modes, means and formats of communication, educational techniques and materials to support persons with disabilities. Recently Ireland was a party to the recommendation of the Council of Europe in relation to the education and social inclusion of children and young persons with ASDs (Council of Europe, 2009). The importance of initial and continuing training programmes for professionals liable to be involved in the education of children and young people with ASDs is explicitly referred to in the recommendation. It has been pointed out that governments may ostensibly subscribe to international charters and agreements and fail to mirror this commitment in national policies and provision (Norwich, 2000; Simmons, 2000). However Kilkelly (2000) observes that these treaties provide an avenue of redress for those whose rights may have been infringed and constitute both a legal and moral force.

### **The Report of the Commission on the Status of People with Disabilities**

The Commission on the Status of People with Disabilities engaged in a nationwide consultative process to identify the barriers that precluded people with disabilities from living full and fulfilled lives in Irish society (Department of Equality and Law Reform, 1996). The report of the Commission concluded that people with disabilities

were excluded from almost every aspect of economic, social, political and cultural life and education and training were identified as areas where exclusion was particularly evident. The Commission was clearly influenced by international practice in presenting a social model of disability and advocating responses from a civil rights perspective to be based on inclusive education legislation (Griffin and Shevlin, 2007). A presumption in favour of inclusive education was articulated and the need to address resourcing, ITE and CPD was reiterated. Echoing the SERC Report, the lack of co-ordination between government departments in meeting the needs of individuals with special educational needs was criticised (Ireland, 1993). Lundström et al. (2000) identify the report as an influential catalyst for change in disability legislation and policy in Ireland.

### **The Task Force on Autism**

The Task Force on Autism published its report in 2001 and is the key source from which the DES continues to develop policy and practice in the education of pupils with ASDs (DES, 2006b; Hanafin, 2008). The terms of reference of the Task Force included reviewing and assessing the adequacy of the current range of educational provision and support services available to children with ASDs in Ireland and considering the requirement for an associated range of appropriate, effective and efficient provision in the future. The Task Force made a series of recommendations in relation to policy and practice. It was advised that national prevalence rates should be investigated and databases of individuals with ASDs compiled. The positive impact of involving parents as partners in the education of their children was affirmed. Establishing effective identification, referral, assessment and multi-disciplinary support services was recommended. The development of robust provision focused on enabling access to a differentiated curriculum, implementing evidence-based practice through a range of educational approaches and encouraging and promoting research in the area of ASDs were also recommended. It was advised that significant resources should be committed to the provision of intensive early services, a presumption created in favour of inclusive education and second-level, third-level and continuing education opportunities extended (DES, 2001). Particular emphasis is evident throughout the report on ensuring cross-departmental

collaboration, in particular between the Department of Health and Children and the DES.

The Task Force on Autism dedicated a chapter to emphasising the criticality of education and training for teachers, other professionals and support staff in assisting them to adequately meet the needs of pupils with ASDs (DES, 2001). It was noted that staff-training and development attracted one of the highest levels of comment in the submissions and a significant concern was articulated with regard to the lack of comprehensive ASD training for teachers and classroom assistants. The Report acknowledged that teaching methods and standards were very closely linked to learning outcomes for all children and cited the need to continually re-assess teaching methods and standards in the light of research, international findings and guidelines on good practice. The importance of teachers of pupils with ASDs being skilled in a range of different interventions, having a good understanding of the nature of ASDs and trained in appropriate behaviour management analysis and strategies was stressed. The concept of a hierarchically sequenced menu to guide teachers so that they receive the minimum basic information and skills initially and progress accordingly to more in-depth training topics was suggested. Attention was also directed to the importance of developing a whole-school ASD-policy to ensure that all school personnel have opportunities to develop an awareness and understanding of ASDs. A range of delivery mechanisms for teacher-education and CPD was envisaged and included modules in pre-service programmes, ongoing CPD, post-graduate programmes providing an in-depth knowledge of ASDs and relevant methodologies, opportunities for skills' updating, conferences, exchange visits, special interest groups, cross-border initiatives, provision of material on the internet and inputs from relevant experts. It was further stressed that it was essential that opportunities for training and research at a high level also be created. The development of initiatives such as the Graduate Certificate in the Education of Pupils with ASDs for teachers working with pupils with ASDs in Special Schools, Special Classes or as Resource Teachers in mainstream Primary and Post-Primary Schools, the Post-Graduate Certificate/Diploma Programme of Continuing Professional Development in Special Educational Needs (ASDs) for teachers and the expansion of the Special Education Support Service indicate that the DES has responded to the

recommendations of the Task Force in relation to developing teachers' competencies in meeting the needs of pupils with ASDs (DES, 2009a; DES, 2009b; Teacher Education Section (TES), DES, 2007).

### **An Overview of Current Provision for Pupils with Autistic Spectrum Disorders**

For the greater part of the twentieth century, no distinct or separate provision was made in the Irish Education System for pupils with ASDs (DES, 2006b). Pupils with ASDs attended special schools according to their assessed level of general learning disability and a significant number were enrolled in schools or classes for pupils with emotional and behavioural disturbance. In a government press release on the fifth of November 1998, the then Minister for Education and Science, Mícheál Martin, introduced the concept of automatic entitlement to support pupils with special educational needs irrespective of their location or general learning disability (DES, 1998). Formal recognition was expressly given to the distinct educational needs of pupils with ASDs and it was announced that special separate educational provision would be made for pupils with ASDs on the basis of a pupil:teacher ratio of six to one and with the support of a child care assistant. Circular 8/99 further detailed the concept of automatic entitlement and outlined the role of the resource teacher in providing additional teaching support to pupils with special educational needs included in mainstream schools (DES, 1999). Subsequent government circulars continue to acknowledge the entitlement of children with ASDs to additional teaching support based on a pupil:teacher ratio of six to one with the support of two SNAs (DES, 2002a; 2003; 2004; 2005a: 2005b).

In a further government press release on the eleventh of October 2000, the Minister for Education and Science at that time, Dr. Michael Woods, announced a range of initiatives to address educational provision for children with ASDs (DES, 2000a). These initiatives included the immediate introduction of a nation-wide pre-school education service for all children with ASDs from the age of three, the extension of the school year through the month of July in specialist ASD settings, a doubling of SNA-support in special classes for pupils with ASDs, a programme of specialised inservice training for teachers at St. Patrick's College, Drumcondra, Dublin and an inter-Departmental team of high level officials to co-ordinate a response to the needs

of children with ASDs. In addition, the Minister stated that he was appointing both a clinical psychologist to advise on the needs of individual pupils with ASDs and an internationally recognised expert in the area of ASD to advise the DES in relation to the development of services and to liaise with the work of the Task Force on Autism, which he had recently launched. Many of these initiatives have been developed and progressed. While a national pre-school service for pupils with ASDs has not been developed, home-tuition grants have been provided for parents to enable them to select their preferred early intervention programme. An extended school year is now a feature of practice, SNAs are provided for those pupils who require additional care-support, post-graduate programmes are available in two third-level colleges, a range of CPD initiatives can be accessed through the SESS and the DES continues to develop provision in relation to ASD in consultation with a range of national and international experts (DES, 2006c; 2009a; 2009b; SESS, 2009).

The NCSE was formally established as an independent statutory body by order of the Minister for Education and Science in December 2003. From the first of October 2005, the Council has been formally established under the EPSEN Act 2004 (Ireland, 2004; Curtin, 2007; Association of Secondary Teachers of Ireland (ASTI), 2010). The functions of the NCSE in relation to pupils with special educational needs are detailed in Section 20 of the EPSEN Act and are concerned with the dissemination of appropriate information relating to national and international best practice in special education, planning and co-ordinating the provision of special education, support services and integrated education in consultation with schools, health boards and other relevant persons, making information available to parents with regard to their entitlements and those of their children, ensuring pupils' progress is monitored and regularly reviewed, assessing and reviewing the resources required in relation to provision and ensuring a continuum of special education provision is available. The NSCE is also allocated a brief in relation to conducting and commissioning research on matters relevant to its functions. Special education needs organisers (SENOs) are employed by the NCSE and are available to schools and parents in all geographical areas of the country. The principal activity of the SENOs to date has been in resourcing schools to assist them in meeting the needs of pupils with special educational needs. Curtin identifies the current challenge for the NCSE as moving

beyond purely resource allocation to the advisory role envisaged in the EPSEN Act 2004. The NSCE has prepared an Implementation Report detailing the views of the Council in relation to the steps required to implement all sections of the EPSEN Act 2004 (NCSE, 2006a). The Report identifies training and development at the levels of pre-service, whole-school, school-management, resource teachers, learning support teachers and SNAs in addition to the provision of information, communication and guidance for parents as key areas that should be prioritised for investment.

Current educational provision for children with ASDs is made in a range of schools and settings that includes dedicated special schools for pupils with ASDs, special classes in special schools for pupils with general learning disabilities, ordinary classes in special schools for pupils with general learning disabilities, special classes in mainstream primary and second-level schools, ordinary classes in mainstream primary and second-level schools, home-based programmes under the Home Tuition Scheme, pre-school classes and centres in which applied behaviour analysis (ABA) approaches are exclusively or largely implemented (DES, 2006b, Hanafin, 2008). Classes are established with a staffing ratio of one teacher and a minimum of two SNAs for every six children (DES, 2009c). Additional SNAs may be allocated as determined by the care needs of individual pupils (DES, 2002b). Start-up grants are provided to enable schools to purchase special equipment, enhanced capitation is paid in respect of each pupil in a special class and assistive technology is funded where this is required (DES, 2009c).

The DES continues to expand the range of provision for pupils with ASDs (DES, 2009c). There are 351 special classes for pupils with ASDs located in special or mainstream schools, which can cater for up to 2,100 pupils. Of these 351 classes, 163 classes are in mainstream schools, 111 classes are in special schools and 36 classes are in post-primary mainstream schools. There are thirty-six pre-school classes for pupils with ASDs and five special classes for pupils with Asperger's Syndrome in mainstream schools. Currently over 3,700 pupils with ASDs are being supported in mainstream classes with additional teaching and SNA-support as required. In addition, 270 pupils are catered for in a number of centres in which ABA approaches are exclusively or largely implemented. The Programme for Government commits to

long-term funding for these existing centres that are currently part of the pilot scheme subject to agreement with the DES on standards that will enable the Department to support them as special schools for pupils with ASDs (DES, 2009c). There are 2,436 SNAs allocated to pupils with ASDs in primary, post-primary and special schools (NCSE, 2009).

The former Minister for Education and Science, Mary Hanafin described government policy in relation to ASD as being concerned with providing a continuum of services for children from age two and a half upwards, employing fully-qualified teachers who have access to additional training in ASD-specific approaches based on a pupil-centred rationale, the provision of additional SNAs as required and the creation of inclusion opportunities with non-ASD peers (Hanafin, 2008). Minister Hanafin further stated that the Department's policy continued to be informed by national and international reports and research, best practice in other countries and advice from the National Educational Psychological Service (NEPS) and the Inspectorate. While significant progress has been made in relation to provision for pupils with ASDs, the Joint Oireachtas Committee (2006) considered that improvements are still required in relation to the development of a nationwide pre-school education service for children with ASDs, comprehensive specialist training of teachers to meet the needs of children with ASDs and psychological expertise to support the educational placements of children with ASDs.

The increased availability of resources in recent years can be considered a key factor that has impacted positively on the development of provision and a symbiotic relationship can also be identified between both judicial intervention and the legislature and the consolidation of provision. Ware (2001) observes that the issuing of the press release by Minister Woods in October 2000 coincided with the delivery of the High Court judgement in *Sinnott v. Minister for Education* (2000), where the DES was severely criticised in relation to the educational provision available for children with ASDs. The NCSE links national and international developments in special education to the drafting of the Education for Persons with Disabilities Bill, which eventually culminated in the EPSEN Act 2004 (NCSE, 2006a). It is therefore acknowledged that judicial intervention and the legislature may also be identified

among the key factors contributing to the consolidation of provision for pupils with ASDs. It is suggested however that their critically influential impact and their status as organs of the State warrant a distinct and detailed examination of their roles.

### **Judicial Intervention**

Parallel to the development of education provision for children with ASDs and in the absence of education legislation, parents of children with special educational needs were seeking recourse to the courts in order to secure the constitutional rights of their children to education (Glendenning, 1999; O'Halloran, 2000; Ring 2004). Ireland adopted a written constitution in 1937 and Osborough (1978) points out that in contrast to the American Constitution, the Irish Constitution expressly enshrines the right to education in Article 42 (Ireland, 1937). In the absence of legislation, the Constitution of 1937 became the guardian of the rights of children with special educational needs to access an appropriate education. The role of the courts is restricted by the doctrine of the constitutional principle of the separation of powers, which states that the three organs of the State, the legislature, the executive and the courts, may not transgress upon the lawful role of the other (Ireland). Mr. Justice Hardiman, in the Supreme Court in *Sinnott v. Minister for Education* (2001), observed that, excepting an extreme situation, Article 42 of the Constitution is a duty to be discharged in the manner endorsed by the legislature and executive, who must necessarily have a wide measure of discretion having regard to available resources and having regard to policy considerations of which they must be the judges. An analysis of *O'Cuanacháin v. The Minister for Education and Science* (2007) suggests that the courts are continuing to adopt this approach in decisions related to the education of children with ASDs. Cordozo (1921) observes that the generalities of a constitution have a significance that will vary from age to age in accordance with the changing needs and development of society. An analysis of judicial intervention suggests that while the courts adhere to the doctrine of the separation of powers, the prevailing and evolving nature of what constitutes appropriate educational provision, continues to be the determiner of the manner in which the courts will interpret the nature of education for individuals with ASDs.



An examination of relevant court judgements is instructive in identifying the key issues considered by the courts in reaching decisions. In particular, the definition and aims of education, international charters and agreements, research and national reports and teacher education can be linked to developments in policy and provision for pupils with ASDs.

### **The Definition and Aims of Education**

O'Mahony (2006) observes that the Irish courts have adopted a broad approach to the definition of education from the perspective of the development of the child but criticises what he observes as a failure to adequately consider the importance of education to the development of society. *O'Donoghue v. The Minister for Health* (1993) presented the first real opportunity for the Irish courts to examine the extent of the right to education for children with special educational needs (O'Murchú, 1998). In 1993, the State was providing for free primary education for children with a range of special educational needs in separate special schools. However there were no formal structures in place to meet the needs of children with severe to profound general learning disabilities (Glendenning, 1999). It was submitted by the respondents that efforts to educate these children were of no real or lasting benefit and that such children were effectively ineducable with reference to the traditional concept of education. In addition, the respondents contended that the education that the State was obliged to provide pursuant to its Constitutional obligation was of a scholastic nature and did not apply to the applicant. Mr. Justice O'Hanlon accepted the definition of education previously adopted by Chief Justice O'Dálaigh, in a Supreme Court decision of 1965 and concluded that education involved providing such advice, instruction or teaching to enable each child to make the best possible use of his or her physical, mental and moral inherent and potential capacities, however limited these may be. This approach adopted by Mr. Justice O'Hanlon has been subsequently accepted either explicitly or implicitly in a number of cases (O'Donoghue v. the Minister for Health, 1996; Sinnott v. Minister for Education, 2000; 2001; O'Carolan v. The Minister for Education and Science, 2005; O'Cuanacháin v. The Minister for Education and Science, 2007).

The courts have considered appropriate education for children with ASDs and concluded that early intervention is desirable and that specialised approaches are necessary (Sinnott v. Minister for Education, 2000; 2001; Nagle v. the South Western Area Health Board, 2001; Cronin v. the Minister for Education and Science, 2004; O’Cuanacháin v. The Minister for Education and Science, 2007). In the Supreme Court, in *Sinnott v. Minister for Education* (2001) Ms. Justice Denham, described an appropriate education for a child with ASD as simple yet complicated. Mr. Justice Peart in *O’Cuanacháin v. The Minister for Education and Science* (2007) referred to the heterogeneous needs of children with ASDs and the importance of providing ASD-specific education to meet the needs of individual children.

Given the wide range of differences between all children with autism, where no single child will have identical needs, and each will need to be considered separately in order to decide exactly what intervention is needed and from time to time as progress is made and as the child grows, it seems obvious that the model of provision decided upon by the Minister must be broad in nature in order to accommodate those differing needs in such children (O’Cuanacháin v. The Minister for Education and Science, 2007, p.255)

Mr Justice Peart also referred to evidence that the national curriculum was the starting point for all children to address their imaginative, emotional, physical, cognitive, spiritual and moral development and concluded that the Minister was entitled to adopt the view that education must be provided from a differentiated national curriculum that takes account of the particular needs of each child with intellectual disability and/or autism and that education at primary level must be delivered by a qualified national teacher. References were also made by Mr. Justice Peart to the importance of inclusion and the provision of opportunities for a child with ASDs to develop social skills. I would argue that this represents a departure by the courts to begin to consider the importance of education in the development of society through acknowledging the development of social awareness and interaction as a legitimate component of a child’s education and directly reflects the prevailing societal position of inclusion.

The analysis of court decisions further suggests that the courts consider that a comprehensive assessment policy is central to providing for pupils with ASDs. Mr. Justice Barr in *Sinnott v. Minister for Education* (2000) referred to the State's breach of duty to Jamie Sinnott as including a failure to provide sufficient psychological and medical assessment and treatment and a failure to keep adequate records of his education, training and treatment. An analysis of the expert testimony provided in the Sinnott Case emphasises the central role of assessment, recording and reviewing of progress in the implementation of a learning and teaching programme for pupils with ASDs. The absence of an appropriate Individual Education Plan (IEP) for Jamie Sinnott was referred to several times during the hearing of the evidence in the Sinnott Case. The key role of assessment, target-setting, record-keeping, and IEPs in the education of a child with ASD is extensively referred to in *O'Cuanacháin v. The Minister for Education and Science* (2007).

Glendenning (1999) describes parents as being at the apex of the pyramidal constitutional structure that supports education. Article 42.1 of the Constitution acknowledges that the primary educator of the child is the family and envisages a subordinate role for the State in education (Ireland, 1937). The importance of involving parents and consulting with them in relation to their children's education programmes has been acknowledged and affirmed by the courts (*Sinnott v. Minister for Education*, 2000; *O'Cuanacháin v. The Minister for Education and Science*, 2007).

The combined deliberations of the court to date suggest that education for pupils with ASDs should be concerned with the holistic development of each individual pupil, provide access to a differentiated national curriculum delivered by a qualified teacher, promote social inclusion, employ ASD-specific approaches as required, regularly monitor, record and assess pupils' progress and meaningfully involve parents. This is commensurate with government policy in relation to providing a child-centred education that is concerned with the holistic development of the child and provided by qualified teachers conversant with the principles of the curriculum (Hanafin, 2008). This corresponds to the aims of the Primary School Curriculum and the Guidelines for Teachers of Students with General Learning Disabilities, which

seek to foster each child's individual identity in a holistic manner through nurturing the spiritual, moral, cognitive, emotional, imaginative, aesthetic, social and physical dimensions of development (NCCA, 1999; 2007a).

### **International Charters, Agreements, Research and National Reports**

Quinn (2000) observes that it is rare to find domestic law and policy determined completely in isolation from international trends. In *O'Donoghue v. The Minister for Health* (1993) Mr. Justice O'Hanlon admitted the Universal Declaration of Human Rights, the UN Convention on the Rights of the Child and the European Convention on Human Rights as documentary evidence (UN, 1948; 1990; Council of Europe, 1950). The principles of equality, entitlement, non-discrimination and participation enunciated in these charters are clearly reflected in the decision of the case. In the High Court and Supreme Court decisions in *Sinnott v. Minister for Education* (2000; 2001), O'Hanlon, J's interpretation of these international charters in the O'Donoghue case was acknowledged and affirmed. In *O'Cuanacháin v. The Minister for Education and Science* (2007), a declaration was sought by the plaintiffs that the provision of S.6 and S.7 of the Education Act, 1998 were incompatible with the defendants' obligations under the European Convention on Human Rights. Sections 6 and 7 of the Education Act relate to the objects of the Act and the functions of the Minister (Ireland, 1998). Mr. Justice Peart, in his judgment in the case concluded that the declaration sought did not arise until such time as the Court was satisfied that a sufficient evidential base had been established to decide that the model of autism-specific education being proposed did not constitute an appropriate primary education for the plaintiff.

The White Paper, which preceded the Education Act, 1998 in Ireland suggests that research can be a potent agent of change, through providing a basis for questioning assumptions, identifying problems, evaluating alternatives and assessing outcomes (Ireland, 1995; 1998). Cook (1991) observes the tendency of the courts to ratify the views of the experts of the time. In *O'Donoghue v. The Minister for Health* (1993) the court considered the oral evidence of Professor James Hogg, co-author of a series of books relating to the education of persons with severe to profound general learning disabilities. One of these publications, which pointed out that research strongly

supported the effectiveness of teaching for these children, was admitted in evidence (Hogg and Sebba, 1986). A range of expert testimony was provided and accepted in the High Court in the case of *Sinnott v. Minister for Education* (2000). The plaintiff in this case, Jamie Sinnott was born on the eleventh of October, 1977. Soon after Jamie was vaccinated, it was reported that he began to develop symptoms of ASDs. It was reported that a psychologist with the Health Board, who was a proponent of the theory of autism developed by Bruno Bettelheim in the 1950s, suggested that childhood autism developed through children experiencing maternal rejection. Mr. Justice Barr accepted that this theory had been discredited and that substantial international progress had been made in this area since the 1960s. In *O’Cuanacháin v. The Minister for Education and Science* (2007), Mr. Justice Peart noted that the research presented by both sides had been interesting and helpful to the Court in gaining an understanding of the debate between professionals and academics as to the relative effectiveness of different approaches to helping children who have been diagnosed with autism.

National Reports have been referred to extensively by the courts and these reports have been used as documentary evidence in reaching decisions in individual cases. In *O’Donoghue v. The Minister for Health* (1993), Mr. Justice O’Hanlon referred in detail to the 1965 Report of the Commission of Inquiry on Mental Handicap and the Report on The Education and Training of Severely and Profoundly Mentally Handicapped Children in Ireland (Department of Health, 1965; Ireland, 1983). Mr. Justice Barr, in *Sinnott v. Minister for Education* (2000), affirmed Mr. Justice O’Hanlon’s analysis of these national reports and admonished the State for its indifference to their findings and recommendations. In *O’Cuanacháin v. The Minister for Education and Science* (2007), the SERC Report, The Report of the Task Force on Autism and An Evaluation of Educational Provision for Children with Autistic Spectrum Disorders were referred to by Mr. Justice Peart as evidence on which the State was defending its provision (Ireland, 1993; DES, 2001; DES, 2006b).

### **Teacher Education**

The role of the State in monitoring education provision through its Inspectorate was criticised in *Sinnott v. Minister for Education* (2000). Professor Peter Mittler cited

the need for a system of monitoring, quality control and quality assurance. The lack of professional training and expertise of teachers of pupils with ASDs was extensively referred to in the case. The qualifications required to teach pupils with ASDs were debated at length in *O’Cuanacháin v. The Minister for Education* (2007). Mr Justice Peart referred to evidence that an initial teaching qualification might be viewed as a starting point to be added to by appropriate additional training, which could take place either simultaneously when taking over the class or prior to doing so. Extensive reference was made in the judgment to the ASD-specific approaches and the availability of CPD for teachers. It was concluded that the quality of teachers will inevitably vary from school to school and as the Minister is obliged to provide for education and not to provide education directly, her constitutional duty was discharged. It was pointed out that each school’s Board of Management had responsibility for the hiring of teachers and the fact that one child or a group of children attended a school where the quality of education may be different or less optimal did not mean that the Minister had failed to provide for an appropriate education as required by the Constitution. This constitutional position was further reaffirmed by the Supreme Court in *O’Keeffe v. Hickey and The Minister for Education and Science* (2008).

### **The Legislature**

It has been suggested that legislation has been enacted to restrict the rights of parents to go to court through requiring them to jump through a series of bureaucratic hoops, which are now enshrined in legislation (O’Rourke, 2004). An alternative view, articulated by McGee (1989-90), is that education legislation represents the considered view at a particular time of a society, or at least of its government, on how best to provide for those with special educational needs. McGee observes that legislation is usually preceded by a report from a committee or a commission. In 1992 the Green Paper on Education articulated the need for education legislation, citing as unsatisfactory the practice of issuing important policy directives in the form of rules and circulars (Ireland, 1992). This was followed by the SERC Report, the Report of the National Education Convention, and the White Paper, all of which reiterated the need for education legislation (Ireland, 1993; Coolahan, 1994; Ireland, 1995). Two Education Bills were drafted in 1997 culminating in the Education Act,

1998 (Ireland, 1997a; 1997b; 1998). An examination of current legislative provision verifies that the emergence of education legislation may also be linked to judicial influence as its development was paralleled by a proactive period in which the courts asserted the constitutional rights of children with special educational needs to appropriate educational provision.

### **The Emergence and Development of Education Legislation**

The Education Act, 1998 places a statutory obligation on the State to provide all persons, including those with disabilities, with support services and a high quality of education appropriate to meeting their needs and abilities (Lundström et al., 2000). Mr. Justice Hardiman, delivering his judgement in *Sinnott v. Minister for Education* (2001), observed that the statutory provisions of the Education Act, 1998 are, at least in some respects, considerably broader than the constitutionally laid down minima and advised that similar actions to the plaintiffs in the future might be pursued under this legislation.

The Equal Status Acts, 2000 to 2004 prohibit discrimination on nine grounds including disability (Ireland, 2000-2004). Access to education is stated to lie within the scope of the Act. Schools are required to provide reasonable accommodation to meet the needs of a person with a disability. 'Reasonable accommodation applies to a range of barriers such as physical, communication and attitudinal. Schools are stated to be liable for discrimination engaged in by an employee under the Acts unless they have taken reasonable steps to prevent it occurring.

The Education (Welfare) Act, 2000 provides for the entitlement of every child in the State to a certain minimum education (Ireland, 2000). Both the decision of the court in the *DPP v. Best* (1998) and Article 42.3.2 of the Constitution are mirrored in the provisions of the Act (Ireland, 1937). Pupils with special educational needs attending recognised schools will be entitled to invoke the provisions of this Act, should they allege that they are not receiving the minimum standard of education.

The provisions of the EPSEN Act 2004 were to be fully commenced by 2011 but this commencement date has now been deferred (Ireland, 2004; O'Keeffe, 2008). It is to

be observed that the issues relating to the provision of an appropriate education that were found to be deficient for Jamie Sinnott in *Sinnott v Minister for Education* (2000) are given legislative status in this Act. These issues include a statutory right to avail of and benefit from education, the centrality of parental involvement, the preparation of an education plan and the development and dissemination of good practice.

The Teaching Council Act, 2001 enables the Teaching Council to review and accredit programmes of teacher education and training and evaluate the standards of education and training appropriate to a person entering a programme of teacher education and training (Ireland, 2001). Prior to the establishment of the Council, teacher formation, education and admission were entirely the remit of the DES (Wall, 2009). Wall suggests that the Teaching Council represents a potentially radical, more fundamental change in the way the teaching profession is governed, trained and interacts. However Wall argues that the continued influence of the State in the governance of the the teaching profession through mandated regulation should not be underestimated. Under S.39 of the Teaching Council Act, the Teaching Council is also allocated a role in promoting the continuing education, training and professional development of teachers, facilitating research, promoting awareness among the teaching profession and the public of the benefits of continuing education, training and professional development. In anticipation of the commencement of this section of the Act, the Teaching Council is researching practice in other jurisdictions and reviewing the current provision for CPD in Ireland (Lawlor, 2008).

The European Convention on Human Rights (ECHR), 1950 was incorporated into domestic law by the European Convention on Human Rights Act 2003 (Council of Europe, 1950; Ireland, 2003). Article 2 of the First Protocol of the Act reiterates that of the ECHR and states that no person shall be denied the right to education. Section 3 of the Act refers to the duty of every organ of the State to perform its functions in a manner compatible with the State's obligations under the provisions of the Convention. This section was invoked by the plaintiff in *O'Cuanacháin v. The Minister for Education and Science* (2007) but as the Court was not satisfied that a sufficient evidential basis had been established, the State's liability under this section was not considered. It has been suggested however that the courts will generally rely



on the Constitution in preference to this Act as the provisions of the Constitution are more extensive and the remedies more effective (O'Mahoney, 2006).

It is evident that the Legislature has moved rapidly from a position in 1998 where a complete absence of legislation was a feature of the education system to one in which legislation is now a key feature of policy development. O'Toole (2006) points out however that while the enactment of legislation on its own cannot provide all answers to the complexities of special education, nevertheless the legislation provides a firm basis for decisions in this area. Since the courts have not had significant opportunities to debate or interpret these provisions to date, the provisions of recent education legislation await judicial interpretation, which will clarify in greater detail the extent of the educational entitlements of individuals with special educational needs.

### **Conclusion**

For a relatively recent phenomenon in terms of historical origin, creating educational provision for pupils with ASDs continues to occupy a prominent profile in both modern media, research and government policy (Jordan, 2008; Kalb, 2008). It is clear that there has been a profound and quite deliberate shift away from a "caring perspective" of disability to a "civil rights" and "entitlement" frame of reference (Jordan). In Ireland, the constitutional and legislative framework is based on this "entitlement" frame of reference and pupils with ASDs are entitled to access, participate in and benefit from an appropriate education. This change presents additional challenges for systems to provide for CPD that enables teachers to develop knowledge, understanding and skills in order to ensure that pupils with ASDs access, participate in and benefit from an appropriate education. The historical overview provided demonstrates that the development of educational provision for pupils with ASDs is linked to, but also distinct from the development of provision for all pupils with special educational needs. In Chapter Four, a conceptual model that links the concept of special educational needs and ASDs will be explored.

**CHAPTER FOUR**  
**LITERATURE REVIEW THREE**  
**RELATING THE CONCEPT OF SPECIAL EDUCATIONAL NEEDS TO**  
**THE LEARNING AND TEACHING OF PUPILS WITH AUTISTIC**  
**SPECTRUM DISORDERS**

**Introduction**

It is clear from an examination of the historical development of ASD educational provision that there is now an entitlement to an appropriate education for pupils with ASDs. Evidence from a behavioural, psychological and autobiographical perspective in Chapter Two highlighted the criticality of teachers understanding the implications of ASDs for learning and teaching. Alderson and Goody (1999) observe that theories of autism are characterised by an extreme narrowing that excludes everything but the person's own self. The authors attribute this narrowing in part to the early theoretical development in the 1940s by Kanner and Asperger during which Fascism and Nazism exerted profound influences on the social and political contexts of the times. The legacy of the theory of autism has led to a tendency to exclude conceptual development in special education and promote the concept that a sanitised approach focusing exclusively on ASDs is possible. However the literature continues to emphasise that the severity of ASDs and general learning disability form two separate dimensions, which should be addressed when planning programmes for individual children (Peeters, 1997; Jordan, 2001; Autism Working Group; O'Brien and Pearson, 2004; Brooks, 2006). The importance of analysing and clarifying the links between the concept of special educational needs and ASDs is therefore critical to identifying the necessary knowledge and understanding required by teachers to meet the learning and teaching needs of pupils with ASDs. The concept of special educational needs, common, group and individual pedagogic needs and curriculum is explored in this chapter and linked with the learning and teaching of pupils with ASDs. The implications for programmes of CPD for teachers are then considered.

## **The Concept of Special Educational Needs**

In order to clarify the links between the concept of special educational needs and ASDs, it is necessary to elucidate the conceptual basis on which special educational needs is understood in the context of the research. The development of this conceptual basis is examined with reference to special educational needs as it relates to both a continuum of need and education for all.

### **Special Educational Needs: A Continuum of Need**

Special education was traditionally associated with the concept of categorisation and identifying groups of individuals through a process of labelling (Söder, 1989). This was linked to the dominance of a medical model of disability, which located the disability within the person and viewed the disability in terms of a deficit (Fulcher, 1989; Oliver, 1995). Andrews et al. (2000) explain that within this perspective, disability was something to fix, cure, accommodate or endure. Special education was conceived as individually oriented with roots in psychology and medicine, positivistic and aimed at developing better intervention methods for specific diagnostic groups (Nilholm, 2006). The medical model of special educational needs was rejected by the Warnock Report (Great Britain, 1978) and a needs' model based on the child's individual needs proposed (Lindsay and Thompson, 1997). The Warnock Report considered the term "special educational needs" to be a more positive approach to meeting the needs of children formerly described as having educational handicaps. It was advocated that the assessment of a child's needs should now be concerned with an analysis of the learning task and learning environment (Rouse and Agbenu, 1998). The Warnock Report suggested that whether a disability or a significant difficulty constituted an educational handicap was contingent on a variety of factors that included the school's expertise, resources, accommodation, organisation and physical and social surroundings.

In effect what was suggested was that there was no clear and categorical distinction between those with educational handicaps and those who did not have educational handicaps and that the existence of such a continuum of need required a continuum of response (Norwich, 1996). This focus on the requirement of additional elements in a pupil's education is commensurate with the concept of special educational needs as

detailed in the SERC Report (Ireland, 1993). Pupils with special educational needs are described in the SERC Report as including all those whose disabilities and/or circumstances prevent or hinder them from benefiting adequately from the education which is normally provided for pupils of the same age, or for whom the education which can generally be provided in the ordinary classroom is not sufficiently challenging. The introduction of the concept of special educational needs coincided with the integration movement and the bid to dispel the notion that special education was a different form of education occurring only in special institutions (Warnock, 1982).

The commitment to having needs identified, met by appropriate provision and regularly reviewed is evident in recent DES circulars and publications and in the provisions of the EPSEN Act 2004 (DES, 2003; 2004; 2005a; 2005b; 2007a; Ireland, 2004). While it is acknowledged that this concept of special educational needs provided a useful starting point, which placed the focus on the needs of the child through departing from a deficit-based model and advocating a service-based model to meet identified needs, it omitted to precisely define whose needs were special and elaborate the central role of teaching as it relates to pedagogy, curriculum and knowledge (Norwich and Lewis, 2005; Norwich, 1996; Warnock, 1982). However I suggest that this concept highlighted the potential impact of the school's expertise, resources, accommodation, organisation and physical and social surroundings on the education of a pupil with special educational needs.

### **Special Educational Needs: Education for All**

The concept of education for all emerged as a response to the idea of integration as being concerned with making additional arrangements to existing provision in order to accommodate pupils with special educational needs. The Salamanca World Conference Declaration Statement asserted that regular schools with an inclusive orientation were the most effective means of combating discriminatory attitudes, creating welcoming communities and achieving education for all (UNESCO, 1994). This model is linked to the re-conceptualisation of disability as a social construction that unnecessarily limits individuals and considers the creation of a caring, adaptable society that addresses human differences and unique needs through eliminating

labelling, stigmas and exclusionary practices as critical (Andrews et al., 2000). However the claim that pupils with special educational needs can achieve their fullest educational progress and social integration in regular schools with an inclusive orientation is based on a largely unsubstantiated evidential framework (Hegarty, 1993; Powers, 1996). There is a danger that the rhetoric of the Salamanca Statement and the purist inclusion paradigm create a risk that the inclusion of pupils with special educational needs will be equated solely with the place of education thereby concealing the complexity of addressing what precisely inclusion means for a child's learning and teaching. Norwich (1999) poses the question whether voluntary or genuinely chosen apartness could count as exclusion where such is deemed necessary to enhance the child's participation in education?

Ainscow (1993) sought to elucidate the concept of providing effective schools for all pupils and criticised the futility of attempting to develop and refine intervention strategies for individual pupils. Ainscow suggested that the concept of special educational needs be reconceptualised in terms of school improvement or possibly reform and teacher development. He further argued that adopting this perspective would avoid the limitations and dangers of the individual pupil view and shift the focus to the importance of contextual influences on the learning of all pupils. Ainscow acknowledged the challenges presented for teachers in adopting an approach, which eschewed the tradition that meeting the needs of pupils with special educational needs was the responsibility of specialists. A pupil's need for additional or different provision was conceived as a need for the existing school system to include and provide appropriate resources for all pupils including pupils with special educational needs (Ainscow, 1995; Ainscow and Tweddle, 1996).

The concept of education for all may not be equated solely with equipping schools to meet pupil diversity as this omits the significant causal role of individual's disabilities interacting with organisational factors in generating special educational needs (Norwich; 1993; Norwich, 1996). Farrell (2000) cautions that the concept of education for all creates a risk that inclusive education for pupils with special educational needs will become subsumed within the wider agenda of school improvement. Norwich (1993) advocates an interactionist perspective in terms of the

interaction of social, psychological and biological terms with reference to internal and external factors, while taking account of whether such factors are actually or potentially alterable or not. Norwich (2006) criticises the vagueness of “participation” being a key concept in inclusion and suggests that it is deliberately used to create ambiguity. I concur with Norwich (1993) that valuing difference and individuality should underpin a concept of special educational needs. I also agree that disability and inclusion are multi-faceted, which precludes the use of easy generalisations and ideological purity implicit in the concept of education for all (Norwich, 2006). Conceptualising special education solely in terms of education for all may have the undesired effect of rendering disability invisible and its consequences for learning and teaching diminished. Söder (1989) suggests that exhortations not to focus on labelling individuals with disabilities may result in minimising the dramatic effects that the characteristics of the disability have on a person’s life. O’Shaughnessy (2008) points out that the positive effects of labelling include access to resources and services, assisting the individual and parents in making sense of experiences and problems, eliciting accommodating and protective behaviour from others, providing access to support groups, increasing teachers’ understanding of the implications for learning and teaching and facilitating research in particular areas of disability. Norwich refers to a quotation from a fourteen-year old boy with a degenerative neuromuscular condition who describes being treated differently on occasions and referring to this as sometimes being a good thing and sometimes a bad thing. Greene (2006), a mother of a child with ASDs rejects the concept of labels as stigmatising the child and views the label as a signpost that enables her to control her son’s development and start making the provision he needs. A number of individuals with ASDs have affirmed that labelling assists in deepening self-knowledge and understanding of the implications of ASDs for the individual (Hall, 2001; Jackson, 2002). Critically Powell and Jordan (1995) highlight the need for teachers to have an accurate diagnosis of a pupil’s special educational need in order to understand how a pupil learns and his/her difficulties with learning.

### **The Concept of Special Educational Needs: An Interconnected Concept**

It is clear that no one theoretical position can conclusively encapsulate the complexity of the concept of special educational needs. Education is concerned with

multiple values, which are not necessarily compatible (Norwich, 1999). In developing a concept of special educational needs, an interconnected model, which seeks to assimilate differing positions and values and acknowledges tensions has the greatest potential to accommodate and augment an effective approach to meeting the learning and teaching needs of all pupils with special educational needs.

Howie (1999) examined four models of special educational needs, their underlying philosophies, the associated implications for learning and teaching and the moral implications for practitioners in adopting a particular model. According to Howie, adopting a model based on accounting for differences between individuals in terms of one or more specific cognitive deficits ignores the role of motivational variables in the learning and teaching process and underplays the individual differences associated with a continuum of need. In contrast, Howie describes a developmental and process approach, based on the work of Vygotsky, which focuses on an individual's development in response to a learning opportunity and acknowledges the social and cultural context of learning. The vital role and moral responsibility of the teacher in varying the levels of mediation in order to effect learning for individual children is emphasised. The ecological model focuses further on contextual factors and an understanding of the child's development as a joint function of environmental influences including school, parents, family and the wider community. The importance of the ecological model in the education of pupils with ASDs is highlighted in recent literature, which emphasises the role of the family and the importance of cultivating partnerships with parents, multi-disciplinary input, collaborative school cultures and transition to the wider community (SIGN, 2007; Jones et al., 2008; Parsons et al., 2009). The discursive approach explores the positioning of the child in legislative and policy documents and considers the life experiences of parents and individuals with disabilities. The importance of understanding the impact of these discursive elements is evident from the previous literature review chapters, which have considered these elements in detail.

Norwich (2006) appeals for a concept of special educational needs that can accommodate the individual-personal with the social-organisational. This largely coincides with Howie's analysis of the concept of special educational needs in terms

of developmental, ecological and discursive elements. I concur with Norwich in relation to the need to develop a concept of special educational needs that takes cognisance of the varied needs of individual learners, the social context of learning and the organisational needs of pedagogy, curriculum and knowledge. However there is insufficient emphasis on the importance of an accurate diagnosis of a special educational need in the model presented by Norwich, which is described and rejected as an all-embracing concept in the first model examined by Howie (1999). I consider that the model related to accounting for individual differences in terms of cognitive deficits explored by Howie (1999) can be linked to the medical model of disability and should be accommodated when considering a model for special educational needs. I concur with Powell and Jordan (1993) that without the teacher having an understanding of an accurate diagnosis of the special educational needs related to ASDs, learning and teaching is likely to be unproductive and may even be harmful for the pupil. I conclude from an examination of the varying theoretical positions that an interconnected framework of special educational needs is required that acknowledges the medical, needs and social models of disability, remains alert to legislative and policy influences, pedagogic needs and curriculum.

### **Common, Group and Individual Pedagogic Needs**

In reviewing the literature in relation to the existence of specialist pedagogies or teaching approaches that are specific to pupils with special educational needs, Lewis and Norwich (2000) conceptualise pedagogy in terms of continua of teaching approaches, which are adapted by teachers to differing degrees in accordance with the needs of the pupils. Norwich and Lewis (2005) define pedagogy in terms of the broad cluster of decisions and actions taken that aim to promote school learning and suggest that there are three broad kinds of pedagogic need, pedagogic needs common to all learners, pedagogic needs specific to groups of learners and pedagogic needs unique to individual learners. However while this is a very useful concept, Norwich and Lewis fail to specify the links between these needs and the wider conceptualisation of special educational need. I subscribe to a paradigm that regards meeting the needs of pupils with special educational needs as being concerned with acknowledging that pedagogic decisions can be influenced by all three kinds of need and must be contextualised within the interconnected model of special educational



needs discussed previously. Pedagogic decisions cannot be made in isolation from this context and must be embedded within an understanding of an accurate diagnosis of a special educational need, the medical, social and needs models of disability, discursive and ecological elements (Powell and Jordan, 1993; Howie, 1999). It is useful therefore to consider pedagogic need as an interrelated and entwined need existing in an inextricably linked pedagogic framework that is based on a foundation of curriculum and knowledge, understanding and skills, which is in turn embedded in the conceptualisation of special educational needs developed above. Such a model captures the ideological impurity in the concept of special educational needs articulated by Norwich (2006) and the critical importance of maintaining balance in order to effectively meet the needs of all pupils.

### *Common Pedagogic Needs*

The field of special education constitutes a conglomeration of several sub-fields, each of which is associated with a particular knowledge base and skills' set that reflects the presumed differences among various categories of disability (Skrtic, 1991). However Skrtic asserts that a basic foundation of communal knowledge to which each sub-field subscribes can also be identified. This is related to the concept of common pedagogic needs. Common pedagogic needs may be equated with what Lewis and Norwich (2000) refer to as "effective pedagogy in general" (p.16). Teaching is described by Powell and Jordan (1993) as a form of social behaviour in which certain assumptions are made based on an intuitive understanding of the nature of the learner and the learning process. Lewis and Norwich observe that research on the effectiveness of pedagogy is of a generic nature and does not distinguish between special educational needs-specific and general pedagogies. A number of broad features of effective pedagogy have been identified in relation to clear structuring and presentation of lessons, promotion of metacognition strategies for learner and teacher, demonstrating a sound knowledge of the subject area, realistic expectations of pupils and good classroom awareness (Lewis and Norwich). I concur with Lewis and Norwich that these identified features are broad, vague and unhelpful and agree that the narrower focus of common principles of effective instruction is more useful in seeking to identify features that are common to all learners. Porter and Ashdown (2002) suggest that the existence of continua

presupposes an acknowledgement that there is an agreement of what generally constitutes effective teaching.

Lewis and Norwich (2000) have identified a range of common principles of effective instruction that are generally applicable to all learners and include training for near and far transfer of learning, presentation of examples by the key difference, scaffolded transition to self-directed learning, mastery learning, development of automaticity, focus on learning not performance goals, situated cognition, knowledge of and mental experimentation with one's own thought processes, strategies to foster self-regulation, inter-leaved learning and socio-cognitive conflict. These principles have been adapted by Porter and Ashdown (2002) and are summarised at Table 1 below. These are similar to what Powell and Jordan (1993) refer to as the intuitive understanding of teachers, which is formed on a template of understanding of human learning in which certain ground rules are accepted.

<b>Table 1. Common Principles of Effective Instruction</b>
<ul style="list-style-type: none"><li>▪ Clarity of Purpose</li><li>▪ Review of Previous Learning</li><li>▪ Continuity across Learning and Teaching Sessions</li><li>▪ Clear Presentation of Lessons</li><li>▪ Teaching in Small Explicit Steps</li><li>▪ Providing Feedback to the Learner</li><li>▪ Directing Attention to the Learner's Feedback to the Teacher</li><li>▪ Engaging in Teacher-Modelling of "Thinking Aloud"</li><li>▪ Encouraging Pupils to Reflect Aloud</li><li>▪ Possessing a Sound Subject Knowledge</li><li>▪ Having Positive Expectations of Pupils</li><li>▪ Monitoring Pupils' Attention to Task</li><li>▪ Anticipating Possible Disruptions</li><li>▪ Maximising Learning Time</li><li>▪ Proficiency in a Repertoire of Teaching Strategies</li><li>▪ Demonstrating Flexibility in the Choice of Teaching Strategy</li></ul>

Developing student teachers' familiarity with the use of these principles and template of understanding of human learning should constitute a key element of initial teacher-

training programmes. However it is also imperative to acknowledge that currently there is no one definite way of explaining how learning takes place (White, 1995).

### *Group Pedagogic Needs*

Pupils with learning disabilities are often identified on the basis of scores on intelligence tests (Dockrell and Messer, 1999). Intelligence tests assess a number of abilities that includes producing and understanding language, solving problems and memorising information and performance in reading and Mathematics (Dockrell and Messer). The authors point out that the language development of children with ASDs is deviant rather than delayed. The bias to language skills in intelligence tests is of particular significance for children with ASDs as this is precisely the area where these children experience most difficulty.

Dockrell and McShane (1992) observe that children with general learning disabilities display a slower rate of learning and reach a lower ceiling of performance than their age-matched peers. Particular difficulties are identified in remembering new information and understanding complex or abstract ideas, generalising learning, completing tasks within the allotted timeframe, and general difficulty with attentional processes. Dockrell and McShane argue that while these traits are clearly identifiable, individuals with general learning disabilities do not constitute a homogenous group.

The SERC Report outlines the group special educational needs of pupils associated with an assessment of mild, moderate and severe to profound general learning disability (Ireland, 1993). Group-specific needs related to an assessment of general learning disability and ASDs are identifiable in the literature (Jordan, 1985; Ireland, 1993; Jordan and Powell, 1995; Jordan, 1999b; Jordan, 2001; Autism Working Group, 2002a; Autism Working Group, 2002b; NAS, 2002; Ernsperger, 2002; 2003; NCCA, 2007a.). Table 2 summarises the group-specific needs that may occur and the associated implications for learning and teaching. However it is also imperative to consider that while group special educational needs may exist, they will not present in the same way for each individual.

To the extent that IQ may be used as an indicator of intelligence, pupils with a mild general learning disability are described as having an IQ in the range of fifty to

seventy on intelligence tests (Ireland, 1993). Such pupils are described as experiencing delayed conceptual development, slow speech and language development, limited ability to abstract and generalise, limited attention span and poor retention ability. A number of pupils may exhibit poor adaptive behaviour, inappropriate or immature personal behaviour, low self-esteem, emotional disturbance and poor fine and gross motor co-ordination.

<b>Table 2. Group-Specific Pedagogic Needs Associated with an Assessment of Autistic Spectrum Disorders and General Learning Disability.</b>		
<b>Traits Particular to ASDs</b>	<b>Implications of these Traits for Learning and Teaching</b>	
<b>Impairments in Social Interaction:</b>	<ul style="list-style-type: none"> <li>• <i>Literal thinkers</i> • <i>Confused by the rules that govern social behaviour</i> • <i>Require direct teaching in social skills</i> • <i>Necessary to structure opportunities for the child to use social skills in different situations</i> • <i>Awareness of the difficulties for the child inherent in less structured situations such as break and lunchtime, and in transition between lessons.</i></li> </ul>	
<b>Impairments in Language and Communication:</b>	<ul style="list-style-type: none"> <li>• <i>The child needs support in understanding the purpose and value of communication</i> • <i>Attention needs to be directed to teaching the social aspects of language e.g. turn-taking.</i> • <i>Direct teaching of gestures, facial expression, vocal intonation and body language</i> • <i>Use of visual material and/signing to support and facilitate the child's communicative initiations and responses</i> • <i>Providing precise instructions for the child to follow.</i></li> </ul>	
<b>Impairments in Imagination with a restricted range of behaviours, activities and interests:</b>	<ul style="list-style-type: none"> <li>• <i>The child must be helped to cope with new and varying activities</i> • <i>Pre-empting the child's anxiety, which results from being presented with unstructured or unfamiliar situations without prior warning/explanation</i> • <i>Devising and implementing a structured play-programme.</i></li> </ul>	
<b>Additional Difficulties</b> <ul style="list-style-type: none"> <li>• sensory and perceptual sensitivities</li> <li>• fine/gross motor control problems</li> <li>• eating, drinking and sleeping irregularities</li> <li>• inability to block out distractions</li> <li>• inappropriate eye-contact</li> <li>• poor organisational skills</li> </ul>	<ul style="list-style-type: none"> <li>• <i>Adjustments must be made to the classroom to address the child's under-sensitivity/over-sensitivity to noise, smell, taste, light, touch or movement</i></li> <li>• <i>Implementing structured and systematic programmes to develop the child's gross and/or fine motor skills</i> • <i>Eliciting relevant information regarding the child's eating, drinking and sleeping irregularities</i> • <i>Structuring the classroom environment to reduce distractions</i> • <i>Securing the child's attention prior to issuing instructions/engaging in conversation</i> • <i>Provision of structures which assist the child in understanding the duration of tasks</i> • <i>Making the links between different tasks clear to the child</i> • <i>Direct teaching of target skills with directedness and clarity.</i></li> </ul>	
<b>Implications of General Learning Disabilities</b>		
<ul style="list-style-type: none"> <li>• <i>mild general learning disability: delayed conceptual development, slow speech and language development, limited ability to generalise, limited attention span and poor retention ability. A number of children may exhibit poor adaptive behaviour, inappropriate or immature personal behaviour, low self-esteem, emotional disturbance and poor fine and gross motor co-ordination.</i></li> </ul>	<ul style="list-style-type: none"> <li>• <i>moderate general learning disability: an impaired development and learning ability in acquiring skills in relation to language, communication, social and personal development, motor co-ordination, basic literacy and numeracy, mobility, leisure and aesthetic pursuits.</i></li> </ul>	<ul style="list-style-type: none"> <li>• <i>severe to profound general learning disability: severe impairment in the ability to function in respect of a basic self-awareness and an awareness of the environment: the promotion of skills in relation to perceptual and cognitive development, language and communication, self-care, fine and gross motor abilities and social and personal development requires particular attention.</i></li> </ul>

The Curriculum Guidelines for Teachers of Students with Mild General Learning Disabilities further elaborate the implications of these group educational needs for learning and teaching and refer to the similarities with their peers who do not have

general learning disabilities (NCCA, 2007b). Reference is made to pupils' wide range of learning styles, the need for a supportive learning environment, the importance of involving pupils in their own learning, the use of task-analysis and consolidation of learning through repetition, avoiding an over-emphasis on literacy and numeracy to the detriment of the provision of a wide range of curricular experiences, setting realistic learning targets, focusing on developing pupils' self-esteem and personal and social skills and engaging the pupil through taking account of individual interests, aptitudes and experiences. Concrete and visual stimulus material, the provision of manageable and varied tasks, ensuring continuity and progression in learning and maintaining a balance between individual, small group and whole class work are identified as key elements of pupils' curricular experiences.

Pupils with a moderate general learning disability are described as having an IQ in the range of thirty-five to fifty on intelligence tests (Ireland, 1993). The SERC Report describes the special educational needs associated with a moderate general learning disability as including impaired development and learning ability in acquiring skills in relation to language and communication, social and personal development, motor co-ordination, basic literacy and numeracy, mobility, leisure and aesthetic pursuits. The Curriculum Guidelines for Teachers of Students with Moderate General Learning Disabilities advise that the learning potential of these pupils, like all pupils, should be recognised and developed as fully as possible (NCCA, 2007c). Concern is expressed that the fact that these pupils follow the same developmental continua as others is often insufficiently recognised. Pupils are described as requiring curricular experiences that consider their poor attention span, limited ability in generalising and transferring knowledge, difficulty in acquiring appropriate personal and social skills and the tendency towards adopting a passive role in their learning.

On intelligence tests, pupils with a severe general learning disability are described as having an IQ in the range of twenty to thirty-five and pupils with a profound general learning disability of having an IQ under twenty (Ireland, 1993). Pupils with a severe and profound general learning disability are described in the SERC Report as likely to be severely impaired in their functioning in respect of a basic awareness and understanding of themselves and their environment. The promotion of these pupils'

skills in relation to perceptual and cognitive development, language and communication, self-care, fine and gross motor abilities and social and personal development requires particular attention. The Curriculum Guidelines for Teachers of Students with Severe and Profound General Learning Disabilities advise that the development of enabling skills should permeate the curriculum and build on pupils' strengths in order to facilitate participation in active learning (NCCA, 2007d). The importance of the holistic nature of the learning experience and the enabling of the awakening and development of the senses is suggested as a basic first step for many pupils. Additional learning needs are cited as the need for learning at a very early developmental level, consideration of additional motor and/or sensory impairment, basic self-care needs, significant communication needs, serious emotional or behavioural needs that affect learning and social interaction and specific help in generalising concepts and skills to accommodate changing contexts.

Lewis and Norwich (2005) argue that there is a lack of clear evidence in the literature to support the existence of special educational needs-specific group pedagogies in accordance with all of the traditional categories used to determine the nature of pupils' special educational needs. Cook and Schirmer (2003) observe that effective practices in special education are not unique to special education and can be used successfully in teaching pupils who do not have special educational needs. The Curriculum Guidelines for Teachers of Students with General Learning Disabilities further consolidate this view and highlight that the characteristics of these groups refer to pupils who are different from each other in many important respects and therefore it is not possible to describe them as homogenous groups (NCCA, 2007a). The categorisation of learning disabilities is best conceptualised as organisational pathologies rather than intrinsic human pathologies, which are inextricably related to eliciting additional resources (Skrtic, 1999; Fuchs and Fuchs, 1995; Parkinson, 2001; DES, 2005a, 2005b). I conclude that it is more useful to conceive existing categories of group special educational needs as orienting concepts that are used to inform rather than define decisions about learning and teaching.

A range of differential approaches and practices has been identified that has been shown to be effective with pupils with ASDs (Jordan, Jones and Murray, 1998).

The triad of impairments and sensory and perceptual differences associated with an assessment of ASD suggest that group-specific pedagogy may be warranted for pupils with ASDs to accommodate the associated learning and teaching implications. Powell and Jordan (1993) identify particular difficulties experienced by individuals with ASDs in relation to communication, motivation, transfer of knowledge and skills, inability to initiate and apparently bizarre social behaviours. The authors further argue that the template of understanding of human learning in which certain ground rules are accepted such as that language is acquired and accordingly used to communicate with, that learners are naturally motivated to make sense of the world and solve new problems according to previously acquired knowledge and skills and that a lack of confidence may be associated with an inability to initiate do not apply to individuals with ASDs. However Lewis and Norwich (2005) argue that group-distinctive pedagogies may exist but that the bases of the general groups to which they apply are not yet precisely defined. This is demonstrated by the fact that many of the pedagogic strategies that are used successfully with children with ASDs may also be of value for other children and that equally not all ASD-specific pedagogic strategies will be appropriate for all children with ASDs.

Lewis and Norwich (2005) suggest that the boundaries of pedagogically-relevant groups will continue to fluctuate and change in accordance with developments in research and practice. It may be more useful therefore for learning and teaching and for teacher education to conceive group pedagogy in terms of what Daniels (1996) describes as a responsive pedagogy with an emphasis on the approach to teaching and thinking proposed by Vygotsky (1978). This is linked also to the developmental and process approach described by Howie (1999), which focuses on an individual's development in response to a learning opportunity and acknowledges the social and cultural context of learning. The vital role and moral responsibility of the teacher in varying the levels of mediation in order to effect learning is emphasised by Howie. This is in accordance with Powell and Jordan's (1993) concept of teaching as a form of social behaviour in which certain assumptions are made based on an intuitive understanding of the nature of the learner and how learning takes place. However the authors suggest that a teacher requires an understanding of the group-pedagogic needs associated with ASDs in addition to an understanding of his/her own intuitive

ways of responding when learning and teaching occur. The authors emphasise the importance of teachers remaining aware of their intuitive understanding of common learning principles in order to understand, by contrast, how the learning of pupils with ASDs occurs. A responsive ASD-pedagogy should therefore incorporate an understanding of the common pedagogic needs of all learners combined with an understanding of the group-pedagogic needs of learners with ASDs. While this responsive pedagogy will often constitute counter-intuitive teaching, it should remain firmly rooted in an understanding of the nature of all learners and how they learn. A knowledge of group-specific needs and the associated pedagogy therefore should form a central part of CPD for teachers in the learning and teaching of children with ASDs.

### *Individual Pedagogic Needs*

Heward (2003) identifies the defining features of special education as individually planned, adopting specialised approaches, materials and supports, maintaining an intensive focus, goal-directed, utilising research-based methods and informed by the individual pupil's performance. The concept of individual needs is well established in the literature related to special education provision (Lewis and Norwich, 2005). Meeting the needs of individual pupils through a child-centred curriculum is a key concept in the Primary School Curriculum and the Curriculum Guidelines for Teachers of Students with General Learning Disabilities (NCCA, 1999; 2007a). Child-centred teaching has been described as "a complex cocktail of competing and sometimes contradictory images of teaching" (Sugrue, 1997, p. ix). Sugrue refers to the dilemma of reconciling child-centredness with a climate that is dominated by accountability, transparency, national testing, league tables and performance indicators and where teaching methods are also interrogated.

Bartak (1993) observes that ASD is not the sole characteristic of a person affected by it and points out that individuals with ASDs vary enormously as do any group of people. Fuchs and Fuchs (1995) suggest that a critical distinguishing factor of special education is its data-based focus on individual pupils, which informs pedagogical decisions. The National Research Council (2001a) advises that careful documentation of a child's unique strengths and weaknesses can have a major impact



on the design of effective intervention programmes and is particularly critical due to the unusual developmental profiles common in children with ASDs. Jordan (2001) point out that a child with ASD has an individual personality and particular experiences and cautions that no child's educational needs can be defined solely in terms of a disability.

The concept of the zone of proximal development (ZPD) conceived by Vygotsky (1978) is a useful construct within which to situate the concept of individual pedagogic needs. Marvin (1998), citing Vygotsky, refers to the key role of social interaction in pupils' learning and the proposition that thinking and learning will develop if this interaction occurs in the pupil's ZPD. Marvin describes the ZPD as the distance between what is presently understood by the pupil and what can be understood with adult support. An interdependent adult-child relationship emerges and the adult support is based on what is received from the pupil. It is evident that the adult requires a high level of knowledge, understanding and skill in order to interpret correctly what is being received from the pupil. This can be linked to the concept of a responsive pedagogy discussed previously where teacher' intuitive and counter-intuitive understanding both have a role in meeting the needs of individual pupils with ASDs. The importance of adopting a responsive pedagogy is even more pronounced with a pupil with ASD where Sainsbury (2000) advises that while some individuals are able to articulate what they need in order to learn, others rely on their teachers to listen to the messages communicated through their behaviour.

There is a discernible perception that meeting the individual pedagogic needs of pupils with ASDs requires the provision of additional one-to-one support. This has led to increasing demands from parents to have SNAs appointed to support pupils with ASDs in Ireland. The data in Table 3 below details the number of pupils with SNA support in the 09/10 school year (NCSE, 2009). Only the category of pupils with emotional/behavioural disturbance has been allocated a greater level of SNA support than pupils with ASDs. A similar tendency is evident in the US whereby school districts are being requested to provide one-to-one aides to enable pupils to progress toward their Individualised Education Programmes (Heflin and Simpson, 1998a). The role of the SNA in Ireland is fundamentally different to the role of

learning support assistants (LSAs) and paraprofessionals in the UK and the US who have a role in relation to supporting pupils' learning. There has been little research in Ireland on the most effective use of SNA support or its impact on pupils' learning. However the research that has been conducted has unanimously identified a dissonance between the prescribed role of the SNA in meeting pupils' care needs and the actual practice in schools where SNAs are adopting a role in supporting learning (Lawlor, 2002; Lawlor and Cregan, 2003; Logan 2006). The number of pupils in receipt of SNA-support and the findings of research suggest that the provision of SNAs presents as a key feature in meeting the individual pedagogic needs of pupils with ASDs. An understanding of the role of the SNA in Ireland and identifying factors, which contribute to the effective management of support staff are critical to contextualising this element of pedagogic need.

**Table 3. Number of Pupils with Special Needs Assistant Support in the 09/10 School Year**

<b>Categories of Special Educational Need</b>	<b>Primary</b>	<b>Special</b>	<b>Post-Primary</b>	<b>Total</b>
<b>Assessed Syndrome</b>	364	15	72	<b>451</b>
<b>Autistic Spectrum Disorders</b>	1890	50	496	<b>2436</b>
<b>Borderline Mild General Learning Disability</b>	127	1	78	<b>206</b>
<b>Emotional/Behavioural Disturbance</b>	2114	10	675	<b>2799</b>
<b>Hearing Impairment</b>	208	3	48	<b>259</b>
<b>Mild General Learning Disability</b>	314	30	246	<b>590</b>
<b>Moderate General Learning Disability</b>	366	63	133	<b>562</b>
<b>Multiple Disabilities</b>	794	104	259	<b>1157</b>
<b>Other</b>	176	0	16	<b>192</b>
<b>Physical Disability</b>	1327	12	474	<b>1813</b>
<b>Severe Emotional/Behavioural Disturbance</b>	410	6	195	<b>611</b>
<b>Severe/Profound General Learning Disability</b>	16	54	3	<b>73</b>
<b>Specific Learning Disability</b>	11	0	22	<b>33</b>
<b>Specific Speech and Language Disorder</b>	<b>290</b>	<b>1</b>	<b>10</b>	<b>301</b>
<b>Visual Impairment</b>	<b>157</b>	<b>6</b>	<b>91</b>	<b>254</b>

## **The Role of the Special Needs Assistant in Ireland**

Special needs assistants are allocated to assist teachers in meeting the care needs of pupils and in accordance with the terms of Circular 07/02 are assigned duties of a non-teaching nature (DES, 2002b). It is clear that the provision of additional support for pupils with special educational needs both in Ireland and internationally has contributed significantly to the enhancement of pupils' experiences in school (Elliott, 2004; Giangreco et al., 2005; Logan, 2006). However concerns have also been expressed regarding the importance of systematically reviewing and evaluating the utilisation of support staff in order to ensure that pupils with special educational needs continue to be supported appropriately in schools (Blatchford et al., 2009; Giangreco et al.). It is acknowledged that direct parallels between the roles of support staff internationally and in Ireland cannot be asserted, however it is suggested that convergence can be identified between the key features of the role in all jurisdictions. The literature variously refers to support staff as teacher assistant, teaching assistant, paraeducator, paraprofessional, teacher aide and instructional assistant. In reviewing the literature "support staff" is adopted as a generic term and specific terms are used where research expressly refers to these particular roles.

Lawlor (2002) conducted research on the role of the SNA in twenty-seven out of the twenty-eight schools for pupils with mild general learning disabilities in the Republic of Ireland. A total of 116 out of 206 teachers and 115 out of 195 SNAs that were surveyed responded. The findings indicate that the role of the SNA has changed from that of a "care" role to a predominantly "educational" one. Eighty-four percent of SNAs in these schools reported being involved mainly in a learning-support or teaching-assistant role. This was corroborated by ninety-five percent of teachers who reported that SNAs were involved in tasks related to literacy, numeracy, speech and language and social-skill development. Similarly seventy-four percent of principals reported that SNAs were engaged in supporting pupils' learning in their schools. Critically a role in support of learning was preferred by SNAs, teachers and principals. Research conducted by Logan (2006) further corroborates Lawlor's findings and describes the emerging educational role of the SNA as encouraging pupils, clarifying instructions, adapting or interpreting lessons and assisting individuals and small groups of pupils with educational activities. Logan identifies

inconsistencies in practice from school to school with regard to issues such as time in school, attendance at staff meetings and she criticises the lack of clear official guidelines in relation to the role of the SNA. Research conducted by O'Neill and Rose (2008), in which questionnaire data were analysed from eighty-two SNAs, indicated that thirty-seven per cent never plan with the teacher and forty-nine per cent reported being involved in the preparation of materials for lessons. These low levels of involvement are a cause for concern as planning and preparation of materials have been identified as key features, which contribute to improved communications and more effective team building (O'Neill and Rose).

Lawlor and Cregan (2003) advise that the appointment of significant numbers of SNAs with minimal or varied qualifications and training and an official job description, which is at variance with the actual practice in schools is a matter that requires attention. The importance of clarity with regard to the role of SNAs in schools and their contribution to the learning environment was highlighted in research conducted by Carrig (2004). Giangreco and Broer (2003) have criticised practice in the US where support staff is being asked to assume ever increasing instructional, curricular and behavioural support responsibilities for pupils with special educational needs. The authors observe that this has created a situation whereby pupils with special educational needs receive education from the least qualified staff rather than from fully certified educators.

Elliott (2004) conducted research that explored the perceptions and practices of SNAs and class teachers in order to identify issues relating to role definition, working relationships and implications for training. Questionnaires were distributed to teachers and SNAs in classes for pupils with ASDs in forty-one schools in the Republic of Ireland. The absence of an official relevant job description, the dissonance between the prescribed role of the SNA and the actual practice in schools, the lack of clarity regarding the SNA's role in the pupils' education and the need for CPD for SNAs in ASDs were identified as areas that required attention. A very good working relationship between staff and a mutual respect and appreciation of the importance of the contribution of SNAs was reported. Teachers acknowledged the

importance of accessing CPD focused on developing their skills in relation to collaboration, teamwork and the management of SNA support.

### *Effective Management of Support Staff in Schools*

While it is generally accepted that the provision of support staff has the potential to enhance the education of pupils with special educational needs, it is also clear that the mere presence of such staff does not automatically result in enhanced educational opportunities for children with special educational needs (Rose, 2000; Office for Standards in Education (OFSTED), 2006; Blatchford et al., 2009). A number of factors, which impact on the effective deployment of support staff in schools has been identified in research. These factors relate directly to the existence of a sensitive and coherent management system. Lorenz (1998) points out that the effective management of support staff provides for an important and vital asset to the whole-school management of pupils with special educational needs. Jerwood (1999) conducted research in a mainstream secondary school in the UK in order to consider how teachers could optimise the use of support staff. She identified that support staff is most effective in classes where teachers possess good management skills. The importance of support staff having a clear understanding of their roles and responsibilities and the promotion of good communication with teachers were considered essential to ensuring that support was optimised. A clear role definition has been identified as a prerequisite to teachers and support staff working effectively in the classroom (Lorenz, 1998; Rose, 2000).

Research has demonstrated that it is not always easy for a teacher to work with other adults in the classroom (Jerwood, 1999; Calder and Grieve, 2004). Balshaw and Farrell (2002) identified key factors, which lead to more effective collaborative teamwork between teachers and support staff. These factors included the development of joint understandings of aims and purposes when working together, clear appreciation of the involvement of support staff in the lesson, prior discussion and planning in relation to curriculum access and the management of continuity between lessons, directing attention to the forms of peer support to be provided, consistent approaches to the management of pupils' behaviour and reflecting on

feedback from each other and from the pupils. The authors emphasised the role of planning in fostering partnerships and collaborative practice.

It has been suggested that while providing classroom support may at times be critical in enabling pupils with special educational needs to access, participate in and benefit from education, attention should also be directed towards the possibility of support reducing the pupil's opportunities for interaction with other pupils or the class teacher (Booth et al., 1997; Blatchford et al., 2009). Carrig (2004) notes that the over-dependence of the pupil on the assistant combined with a lack of involvement of the class teacher can lead to the pupil becoming more isolated rather than more included. Research has indicated that teachers may be less involved when a pupil is being supported by support staff as the teacher perceives that individual support is being provided (Giangreco et al., 2005; Blatchford et al.). Giangreco et al. point to research, which indicates that some pupils with special educational needs may express their dislike of being provided with additional support by displaying inappropriate behaviours. A balance should therefore be maintained between providing support and maintaining pupils' independence (Fox, 1993). Heflin and Simpson (1998b) point to the need to plan the systematic fading of one-to-one support for pupils with ASDs. The deployment of SNA support in meeting the individual pedagogic needs of pupils with ASDs requires systematic planning and careful consideration of the principles identified in the literature in order to ensure that pupils' access to optimal education experiences is not compromised.

### **Curriculum**

The Primary School Curriculum has been described as an inclusive, child-centred curriculum designed to meet the needs of all pupils and aims to foster each pupil's individual identity in a holistic manner through nurturing the spiritual, moral, cognitive, emotional, imaginative, aesthetic, social and physical dimensions of development (Fallon-Byrne, 1997; NCCA, 1999). For the purposes of this research and in order to accord with the rationale of the Primary School Curriculum in Ireland and the Curriculum Guidelines for Teachers of Students with General Learning Disabilities, curriculum is conceived in terms of aims, goals, content and contexts (Evans and Ware, 1987; Norwich, 1990; Conti-Ramsden et al. 1992; NCCA, 1999;

2007a). Ysseldyke (1996) considers that goals, effective strategies and accountability are necessary elements in improving the learning and teaching opportunities for pupils with special educational needs. These elements are closely related to the process of assessment, which constitutes an integral part of learning and teaching (NCCA, 2007a). I concur with Jordan (2005) that curriculum must be conceived in broad terms if it is to be viewed as being appropriate to meeting the needs of all pupils. Jordan contends that common curricular goals, content and contexts should be mediated through an understanding of group and individual differences and suggests that training is essential in order to effect appropriate mediation. Jordan concludes that pupils with ASDs are entitled to access a broad and relevant but not necessarily balanced curriculum. The author contends that providing appropriately for individual pupils should be prioritised and that such an approach may not necessarily involve providing a balanced range of curriculum experiences for each pupil.

The Report of the Task Force on Autism refers to difficulties and confusion experienced by teachers in mediating the curriculum for children with ASDs (DES, 2001). It is pointed out that as individual teachers at primary and post-primary levels in Ireland are responsible for curriculum development and decisions regarding methodology and teaching approaches, the absence of adequate training may lead to isolation and difficulty. The DES Inspectorate recommends that all children with ASDs are provided with a broad and relevant curriculum that addresses the triad of impairments, accommodates the special educational needs of the child arising from a general learning disability or other co-occurring difficulty, attends to developmental and adaptive needs, addresses the management of behaviour that interferes with children's learning and provides curricular experiences that are concerned with the holistic development of the child (DES, 2006b). The effective implementation of this recommendation requires the application of skills related to a basic teacher-training qualification and common pedagogic needs and knowledge related to the group and individual pedagogic needs of pupils with ASDs. The concept of the knowledge required to teach pupils with ASDs includes the necessary associated understanding and skills (Jordan, 2007b). Teachers require access to CPD programmes that enable them to develop the requisite knowledge, understanding and skills to implement appropriate curriculum experiences for pupils with ASDs.

## **An Interconnected Model: Implications for Programmes of Continuing Professional Development for Teachers of Pupils with Autistic Spectrum Disorders**

Meeting the diverse needs of pupils with special educational needs within a common curriculum framework is a challenging task that requires specific knowledge, understanding and skills to guide daily curriculum design and delivery (Norwich, 1990; Ware, 1997; Hornby, 1999; Norwich and Lewis, 2005). The interconnected model of special educational needs suggested above accommodates the link between the concept of special educational needs and ASDs. A programme of CPD based on this model should acknowledge the discursive elements of legislative and policy developments, encompass the medical, needs and social models of disability, elucidate common, group and individual pedagogic needs in the context of a responsive pedagogy, promote the concept of curriculum access and focus on the development of teachers' appropriate knowledge, understanding and skills.

### **Conclusion**

The chapter has identified the criticality of teachers developing a knowledge and understanding of common, group and individual pedagogic needs in meeting the needs of pupils with ASDs. The implementation of the curriculum is dependant on teachers' ability to mediate common curricular goals, content and contexts through an understanding of common, group and individual needs (Powell and Jordan, 1993; Jordan, 2005). Chapter Five reviews the literature on the range of approaches that has been developed to meet the group pedagogic needs of pupils with ASDs. These approaches differ in their theoretical bases and consequent intervention programmes (Marwick et al., 2005).



**CHAPTER FIVE**  
**LITERATURE REVIEW FOUR**  
**GROUP PEDAGOGIC APPROACHES TO THE LEARNING AND**  
**TEACHING OF PUPILS WITH AUTISTIC SPECTRUM DISORDERS**

**Introduction**

Considerable debate and controversy surrounds the selection of reliable and valid methods in evaluating educational programmes (House, 2005). House observes that in the US, Federal policy formerly stipulated that the evaluation of education initiatives should be through experimental and statistical methods. The approach adopted was largely based on that taken in research in the natural sciences and medicine. The term “scientific” conjures up the possibility of creating a clinically controlled environment and fails to acknowledge the fact that research being conducted in real life with real people is not amenable either practically or ethically to exercising such tight laboratory-type control. Pupils are taught in schools with other pupils in preparation for effective functioning in a social world and pupil outcomes are influenced by countless uncontrollable real world variables, which comprise social causation. It is therefore misleading to suggest that approaches developed in laboratory-controlled research contexts can be transferred directly to school settings and achieve identical outcomes. The Follow Through early childhood programme evaluations in six different sites in the US produced different outcomes for pupils, demonstrating that the complexities inherent in social causation impact on research in educational contexts (House). However adopting a science-based approach is frequently cited as critical to the integrity of evaluating approaches to the learning and teaching of pupils with ASDs and ABA is frequently cited as the sole scientific approach (Leader, 2007). Porter and Lacey (2005) observe that research in ABA has largely dominated American special education research output. I concur with the authors when they suggest that this has serious implications, considering that globally, research that is disseminated and has the potential to impact may rest with relatively few researchers working within narrow spheres of education. The seductiveness of the concept of “scientific” rigour as it applies to research with individuals with ASDs requires careful consideration and analysis in view of the

factors that contribute to social causation, research methodology decisions and the heterogeneity of individuals with ASDs.

A range of conceptual and pragmatic issues related to the difficulties of engaging in scientific research with individuals with ASDs has been identified (Burack et al., 2004; Simpson, 2005). I share the concern of Smith (2003a) that moving the testing of education practice towards the medical model used by scientists to assess the effectiveness of approaches is not wholly compatible with research in education, which takes place in social contexts. Variables such as programme content and intensity, the motivation, qualifications, expertise and experience of those implementing the programme, the specific strategies and resources used within the particular approach, the sampling procedures adopted, the environment in which the approach is being delivered, the administration of the assessment instrument used to establish base-line data and the assessment instruments used to measure outcomes should all be precisely controlled for when “scientific” outcomes are being claimed. The precision with which all of these variables are controlled is not readily or accurately ascertainable from research studies. There are difficulties related to controlling and precisely defining variables such as therapist behaviour and therapist-child interactions (Symes et al, 2006). Additionally controlling for other interventions being used simultaneously by parents is also problematic (Green et al., 2006). It has been pointed out that teachers and parents tend to blend interventions together in ways that make sense for them and fail to adhere strictly to the specific approach being researched (Kasari, 2002). This creates a difficulty in identifying whether the approach being evaluated is in fact the approach that was implemented (Weisz and Hawley, 1998).

Having taught, observed and interacted with children with ASDs for a number of years, what is particularly striking is the heterogeneous nature of children’s behaviours, motivation and responses to intervention, which complicates the task of finding a comparison group for “scientific” research purposes. Alderson and Goody (1999) point out that since there are so many characteristics linked to ASDs, a single person is unlikely to have all of them, which leads to confusion and incoherence in definitions of ASDs that purport to be definitive and further compounds the difficulty

of reaching authoritative conclusions from comparative research. Parsons et al. (2009) observe that definitions of ASD subgroups are changing and expanding, which has implications for applying the reported effects of earlier research to children and young people currently being assessed as having ASDs. The authors also observe that children and adults with ASDs are individuals and members of families, which further contributes to the heterogeneity of the population. Scientific evidence of efficacy assumes a homogeneous population, which suggests that some interventions that do not have demonstrated effectiveness across the population, may be efficacious in a small sub-set of the population (NIASA, 2003). This has particular resonance in assessing the efficacy of interventions for pupils with ASDs where much of the research has been conducted with smaller samples and the heterogeneous nature of the population is well documented.

The complexities in conducting research with individuals with ASDs stemming from social causation, research methodology decisions and the heterogeneity of the population suggest that an alternative approach to empiricism in ASD research is required. Burack et al. (2004) highlight the necessity of providing comprehensive and precise descriptions of comparison groups in order that the outcome of the research can be interpreted within the context of the chosen approach. Accordingly the authors suggest that empiricism in research with individuals with ASDs should be conceptualised within a “mosaic” framework, allowing for a series of smaller scale findings rather than a “melting pot” of broader but less precise findings. This is corroborated by NIASA who suggest that single subject case designs may provide evidence of more general effectiveness, and lead to the identification of treatment sensitive sub-groups. Additionally the concept of social validation emerges as a concept that could potentially contribute to empiricism in ASD research. Social validation is a process whereby users of the interventions evaluate whether the goals of the intervention are socially desirable and a determination of the appropriateness and acceptability to practitioners and caregivers of the implementation of the programme in classrooms, homes and clinics is made (Callahan et al., 2008). The authors conducted a social validation survey with parents, teachers and administrators and found consistent support for programme components in five areas related to individualised programming, data collection, the use of empirically-based

strategies, active collaboration and a focus on long-term outcomes. The overall response rate was 57.7% (187 surveys out of 324 were returned), including fifty-four teachers, ninety-five parents, and sixteen administrators. Social validation programmes enable the components of programmes to be isolated and evaluated in order to begin to establish which specific components of programmes are effective in meeting the needs of pupils with ASDs (Callahan et al., 2009).

Through adopting an alternative empiricism that incorporates a mosaic approach allowing for small scale research designs and incorporating social validation, the conceptual and pragmatic difficulties related to engaging in scientific research with individuals with ASDs can be mitigated. It is suggested that it is possible to generate systematic, rigorous and robust research that is empirically-informed and representative of the wide range of practices in the learning and teaching of individuals with ASDs.

#### **Autistic Spectrum Disorder-Specific Approaches**

For the purposes of reviewing approaches, I will employ “an alternative empiricism” rather than a “scientific” approach to ascertaining the efficacy of specific approaches in the learning and teaching of pupils with ASDs. The approaches to be reviewed were chosen with reference to the criterion that they potentially represented the approaches that teachers in Ireland would be familiar with (DES, 2006c, 2009a). The approaches to be reviewed are outlined at Table 4 below.

**Table 4. Autistic Spectrum Disorder-Specific Approaches**

<b>Behavioural Approaches</b>	The Lovaas Programme Applied Behaviour Analysis
<b>Communicative Approaches</b>	A Total Communication Approach
<b>Social Responsiveness Approaches</b>	Social Stories
<b>Interactive Approaches</b>	Intensive Interaction Play
<b>Inclusion Approaches</b>	The Leap Programme Social Skills Programme
<b>Discrete Approaches</b>	The Treatment and Education of Autistic and related Communication-handicapped Children

## **Behavioural Approaches**

Behavioural approaches originate from Skinner's work in modifying the behaviour of animals in the 1950s and have been widely used in intervention programmes for pupils with ASDs (Howlin, 2001). Behavioural theory suggests that both adaptive and maladaptive human behaviour is learned and that learning occurs as a result of the consequences of behaviour (Alberto and Troutman, 2006). Autistic spectrum disorder is conceptualised as a behavioural disorder characterised by impairments in social interaction, communication and flexibility of thought and behaviour, which is addressed through eliminating unwanted behaviours and focusing on skill training (Howlin, 2002).

Heflin and Fiorino Alaimo (2007) observe that arguments about the use of ABA have consumed vast amounts of time, effort and professional resources. Applied behaviour analysis is described as "the process of applying sometimes tentative principles of behaviour to the improvement of specific behaviours, and simultaneously evaluating whether or not any changes noted are indeed attributed to the process" (Baer et al., 1968, p. 91). In Ireland, demands by parents for the provision of exclusive ABA have been the subject of a considerable volume of litigation (*Sinnott v. Minister for Education*, 2000; 2001; *Nagle v. the South Western Area Health Board*, 2001; *Cronin v. The Minister for Education and Science*, 2004; *O'Carolan v. The Minister for Education and Science*, 2005; *O'Cuanacháin v. The Minister for Education and Science*, 2007). An examination of the expert testimony in these cases reveals that the arguments centre predominantly on whether, the use of discrete trial training, which is one of the many strategies of ABA, can achieve normal educational and intellectual functioning for pupils with ASDs as research by Lovaas (1987) suggests. The Lovaas programme has been extensively referred to and cited in these cases and will thus be examined in depth in addition to the further related research that has sought to replicate its findings.

### ***The Lovaas Programme***

This programme was developed by Lovaas to demonstrate the effectiveness of early intensive behavioural intervention in improving the prognosis of children with ASDs (Degli Espinosa, 2001). Lovaas (1981) stated that "we didn't offer treatment for

autism or schizophrenia, instead we were teaching the children specific behaviours such as language, play, and affection... The whole diagnostic enterprise became increasingly irrelevant" (Lovaas, p. x). Treatment is home-based and children are engaged in the programme for approximately forty hours per week with the desired outcome described as that of achieving full integration into a mainstream classroom (Degli Espinosa). The behavioural techniques of reinforcement, shaping, prompt and prompt fading inform the rationale that underpins the programme (Lovaas and Smith, 1989). The Lovaas programme is adult led and the adult pre-selects the activity and materials to be used (Wall, 2004). Discrete trial training (DTT) is a key element and is concerned with applying behavioural principles intensively within a structured environment in order to teach specific skills (Heflin and Fiorino Alaimo, 2007). Discrete trial training is described as securing the pupil's attention, presenting the stimulus, waiting for the pupil's response, providing a consequence following the response and allowing an inter-trial period for the pupil to enjoy reinforcement and recording of data (Heflin and Fiorino Alaimo). A discrete trial is therefore a small self-contained unit of instruction, that usually lasts for a period of five to twenty seconds and is implemented on a one-to-one basis with a pupil in a distraction free-setting (Smith, 2001a). Each child has access to an individualised programme that includes the development of imitation, communication, socialisation, self-help, play, compliance and academic skills (Leaf and McEachin, 1999; Maurice et al., 2001; Lovaas, 2003). Parents receive training and are encouraged to maintain the programme outside of the forty hours that are specifically dedicated to it (Connor, 1998).

An examination of the Lovaas research study suggests that there are limitations and deficiencies, which should be considered when assertions are being made in relation to its impact. Prescribing a forty-hour week for each child considering children's heterogeneous needs may be inappropriate for every child. Employing different tests at pre and post-test, administering tests under non-standardised conditions and recording substantial changes in the primary dependant standardised variable of intellectual functioning are relevant factors that require consideration. Recovery was defined in terms of success in working through first grade in school and of gaining satisfactory IQ scores and possible residual deficits such as social, behavioural and

communicative performances were not considered. Critically groupings were not random and the experimental group contained a concentration of cases with better prognoses in terms of being assessed as higher functioning. The success of a pupil gaining a place in mainstream education may also have been influenced by the policy of individual school districts or parental pressure. Physical punishment was used to decrease inappropriate behaviour in the form of a slap on the thigh or the delivery of a loud “no”. The characteristics of the therapist or the role of the family in delivering the approach were not isolated and Shea (2004) points to the reliance on parental report measures. McEachin et al. (1993) conducted a long-term follow up of the original participants and indicated that the experimental group (assessed at a mean age of thirteen) had preserved the gains relative to the control groups in measured intelligence and adaptive behaviour. However the authors cited the need for further investigations by independent researchers and the sharp division in the experimental group between those who recovered and those who did not, raising the question of whether a different approach entirely would have helped the latter children.

Sallows and Gropner, (2005) randomly assigned twenty-four children with ASDs to a clinic-directed group, replicating the parameters of the early intensive behavioural treatment developed by Lovaas or to a parent-directed group that received intensive hours but less supervision by equally well-trained supervisors. Outcome after four years of treatment, including cognitive, language, adaptive, social, and academic measures, was similar for both groups. After combining groups, it was shown that forty-eight percent of all children showed rapid learning, achieved average post-treatment scores, and at the age of seven, were succeeding in regular education classrooms. Treatment outcome was best predicted by pre-treatment imitation, language and social responsiveness. According to the authors, these results are consistent with those reported by Lovaas (1987) and McEachin et al. (1993).

However this was not a replica of the Lovaas study as aversives were not used and positive interactions were built up by engaging in favourite activities and responding to the gestures used by each child to indicate desires. Brief standard instructions were employed, the child’s familiar toys were used, only two or three trials were presented at a time and powerful reinforcers were used such as edibles, physical play and enthusiastic affirmations. Between brief learning periods, staff played with children

to render the process more like play than work, generalise material learned into more natural settings and continue to build social responsiveness.

Cohen et al. (2006) conducted a three-year prospective outcome study that compared two groups, twenty-one children who received thirty-five to forty hours per week of early intensive behavioural treatment (EIBT) and twenty-one age and IQ matched children in special education classes in local public schools. It was reported that the EIBT group obtained significantly higher IQ and adaptive behaviour scores than did the comparison group. No difference was found between groups in either language comprehension or non-verbal skills. Six of the EIBT children were fully included into regular education without assistance at year three and eleven others were included with support, in contrast, only one comparison child was placed primarily in regular education. However limitations are evident in this study in relation to the non-random assignment of children to groups, the role of parental choice in assigning children to groups, the more two-parent and better educated families in the EIBT group than in the comparison group, augmenting discrete trial with play, generalisation, community activities, incidental teaching and peer-play.

Rimland (1994) cited in Connor (1998) suggests that the operant training and the teaching of specific behaviours succeed in directing and focusing the pupil's attention, the provision of immediate motivation enables the pupil to progress through a series of selected behavioural steps that teaches specific skills and enables the pupil to learn. Heflin and Fiorino Alaimo (2007) point out that the emphasis on rote learning can be effective for acquiring skills and note that most people learning basic facts such as multiplication tables, friends' names and telephone numbers learn through what is essentially DTT. Discrete trial training provides many opportunities for pupils to learn and practice as trials are short and allow the pupil to respond frequently (Smith, 2001a). However the exclusive use of DTT has been identified as leading to difficulties in relation to the generalisation of skills to other contexts, a lack of spontaneity, robotic responding, prompt dependency, slow progress, excessively time-consuming, and some pupils' aversion to the intervention, leading to the emergence of escape motivated behaviours (Schreibman, 2007). Discrete trial training is not appropriate for teaching pupils the full range of cognitive, social, academic, leisure and functional living skills that pupils with ASDs require to



develop and generalise their learning to the variety of natural environments (Steege et al., 2007). Smith observes that the precise amount of time a pupil should engage in DTT has generated much debate and notes that scant data exist to move this debate forward. Smith advises that factors such as an individual pupil's learning style, skill level, family circumstances, and the pupil's responsiveness to the approach are key factors to consider when determining the intensity of DTT a pupil requires. Smith concludes that regardless of when a pupil begins DTT, all pupils should require less and less over time.

### *Applied Behaviour Analysis*

Applied Behaviour Analysis is a component of behavioural psychology, that focuses on the study of observable interactions between individuals and their environment (Heflin and Alberto, 2001; Steege et al., 2007). A focus is maintained on teaching pupils skills they do not have and managing the behaviours that interfere with pupils' learning (Jennet et al., 2003; Tutt et al., 2006). A confusing and misleading tendency has emerged both in the literature and in the modern media, whereby ABA is equated with the instructional strategy of DTT (Heflin and Alberto). While DTT is one of the strategies of ABA, there is also a wide range of research in ABA that uses a variety of other behavioural strategies. Proponents of ABA, Baer et al. (1968; 1987), suggest that for an intervention to be considered ABA it must be applied and effective, use strategies that have been shown to be effective, view behaviour as functional, demonstrate accountability through data collection and analysis and consider strategies for facilitating stimulus generalisation and response maintenance in developing programmes. Guidelines published by the New York State Department of Health recommend that the principles of ABA and behaviour intervention strategies be included as important elements in intervention programmes for young children with ASDs (New York State Department Health, 1999).

Incidental teaching, which involves structuring the environment to encourage the pupil to initiate activities and subsequently teaching the pupil in the context of the chosen activities has been shown to be an effective strategy of ABA for pupils with ASDs (Smith, 2001a). Pivotal response training (PRT) has also evolved from ABA (Bryson et al. 2007). While DTT focuses on individual target behaviours, PRT

focuses on identifying pivotal behaviours that if changed may impact on a child's learning in a range of areas (Schreibman, 2007). Motivation, responsivity, self-initiated interactions and self-regulation of state have been identified as pivotal behaviours for children with ASDs (Bryson et al.). A critical element of PRT is providing a reinforcer that is directly related and intrinsic to the pupil's response. Tasks that the pupil has previously mastered are interspersed with new tasks during the learning and teaching sessions. There is an emphasis on shared control through the use of turn-taking and the naturalistic learning contexts allow the teacher to model more sophisticated language patterns. Evidence that parents and teachers can be trained successfully to implement PRT in relatively short periods of time optimises the opportunities for consistency, intensity and sustainability of the intervention (Koegel et al., 1996; Bryson et al.; Suhrheinrich, 2007).

### *Summary of Review of Behavioural Approaches*

Behavioural approaches have been shown to impact beneficially on language acquisition, to suppress aggression and self-stimulatory behaviours and to have a positive influence on an individual's general development (Lovaas, 1981; Lovaas, 1987; McEachin et al. 1993; Campbell et al., 1996; Sallows and Gropner, 2005; Cohen et al., 2006). Research studies indicate that children who received intensive behavioural interventions demonstrated greater improvements than children in the control groups who received less behavioural interventions, another type of intervention or no intervention (Lovaas, 1987; Birnbrauer and Leach, 1993; McEachin et al.; Smith et al., 1997).

However in each of these studies, behavioural interventions were delivered in the context of a programme that included specific curriculum content, intense interventions, parental involvement, highly structured and systematic record keeping and assessment. It is important to note that in general individuals with higher levels of intellectual functioning demonstrated better outcomes and that none of these studies used random assignment of research participants to groups. Many of the deficiencies outlined in relation to the Lovaas (1987) study continue to present in subsequent research, which has failed to fully amend these deficiencies. Recently Dawson et al. (2010) conducted a randomised controlled trial of the Early Start

Denver Model (ESDM), which is based on developmental and applied behaviour analytic principles. Forty-eight children with ASDs between eighteen and thirty months were randomly assigned to an ESDM intervention delivered by trained therapists and parents for two years or to community providers for intervention commonly available in the community. The ESDM group received two-hour sessions, twice daily, five days per week for two years and the community-based group received an average 9.1 hours of individual therapy and an average of 9.3 hours per week of group interventions across the two-year period. Children who received ESDM demonstrated significant improvements in IQ, adaptive behaviour and ASD diagnosis compared with the children who received community-based interventions. Consistent improvement in communication abilities was also found in the ESDM group. However the fact that ABA was delivered within an affectively rich, relationship-focused context, a detailed intervention manual and curriculum were used and parents were trained to use these strategies at home during daily activities may have contributed to the success of this intervention. The intensity of the ESDM programme and the expertise of therapists may also be factors, which contributed to the progress of the children in the ESDM group.

The evidence suggests that ABA employs successful teaching principles such as that learning occurs in discrete and measurable segments, that consequence conditions can influence learning and behavioural change and that shared understandings between parents and professionals are critical. However it has also been observed that the principles on which ABA are based are not all-encompassing principles of human behaviour, learning or development (McGee et al, 1987; Mesibov, 1993; Connor, 1998). Asperger (1979) expressed reservations about using behavioural approaches with children with AS who might view the approaches as an intrusion on their personal freedom. Wing (1981) acknowledged that techniques of behaviour modification can be of benefit but only if applied with sensitivity. Michelle Dawson (2007), an individual with ASD expresses concern that parents and researchers may be misled by ABA being incorrectly described as scientifically proven and medically necessary. Grandin (1995) acknowledges the success of the Lovass programme for particular children, but cautions that the intense focus of the programme may be confusing and possibly painful for children who experience severe sensory jumbling and mixing problems. She further advises that too much intrusion can cause children

to exhibit sensory-induced tantrums. Howley and Arnold (2005) note that while social skills are relatively easy to teach to individuals with ASDs, they may remain as splinter skills unless taught within more meaningful social contexts that address the development of social judgement and understanding.

Shea (2004) examined the research literature on early intensive behavioural intervention (EIBI) and concluded that the expectation that forty-seven percent of participants who receive EIBI will reach normal developmental status is erroneous. Shea concludes that the consensus of the professional literature indicates that a variety of educational and therapeutic techniques assist children with ASDs at all levels of functioning to develop skills, interests and relationships. Magiati et al. (2007) conducted a prospective study, associated with outcomes related to cognitive ability, language, play, adaptive behaviour skills and severity of autism, for sixteen pre-school children receiving ASD-specific nursery provision and twenty-eight children receiving home-based EIBI in a community setting over a two-year period. The nursery provision was described as eclectic, emphasising structure, visual cues, individualised teaching, close liaison with parents and variously including elements of the Treatment and Education of Autistic and Related Communication handicapped Children (TEACCH), the Picture Exchange Communication System (PECS), a manual signing-system and other generic developmental and behavioural teaching methods. At follow-up, there were no significant group differences in cognitive ability, language, play or severity of ASDs. The only reported difference approaching significance in favour of the EIBI group was for the scores on the daily living skills assessment. Large individual differences in progress were evident, with intake IQ and language level identified as the best predictors of overall progress for individual children. The study does not support the claims that almost fifty-per cent of participants receiving early intensive behaviourally-based programmes achieve normal educational and intellectual functioning. Magiati et al. noted that no child from either group was enrolled in a mainstream school without one-to-one support. Gernsbacher (2003) cautions against claiming that ABA as an intervention has been scientifically proven and notes the lack of random assignment in the practice of assigning research participants to treatment versus control conditions in research studies. Recent single case study research indicates that ABA can be used

successfully as part of a combination of approaches and methodologies in accordance with the identified needs of each child (Greene, 2006).

### **Communicative Approaches**

It has been observed by parents that their children's early behaviours seem designed to switch off rather than stimulate communication (Golding and Powell, 2001; Gardner, 2007). Approximately fifty percent of children with ASDs fail to develop speech as a primary means of communication (Prizant, 1996). Therefore the need to provide these children with alternative means of communicating is essential. Kiernan et al. (1982) note that the use of communication systems ranging from pictographic symbol systems through manual sign systems have spread to diverse populations including individuals with general learning disabilities and individuals with ASDs.

#### ***A Total Communication Approach***

A total communication approach envisages the use of an integrated range of strategies and approaches to enable an individual to communicate spontaneously (Potter and Whittaker, 2001). The authors analysed the spontaneous communication of eighteen young children with ASDs and concluded that a total communication approach could significantly enhance the communication competency of children with ASDs. The authors further emphasised the importance of adopting a capacity approach focusing on children's strengths and abilities in the areas of communication and social development. Recent research by Ostry et al. (2009) further consolidates this view in advocating a multi-modal approach to developing children's communication skills. The PECS and augmentative communication systems can be used as elements of the total communication approach.

#### ***The Picture Exchange Communication System***

The PECS involves the use of pictures in a distinctive manner that starts with requesting in preference to labelling, requires interaction with others and encourages the pupil to initiate communication rather than responding to a prompt (Jordan et al., 1998). Requesting is taught in the early stages because it gives immediate access to activities and objects that have been identified as highly motivating for the pupil (Porter and Ashdown, 2002). The main objective of the PECS is to assist pupils in acquiring clear, functional communication skills (Webb, 2000). The use of visual

symbols accommodates the strong visual learning modality of individuals with ASDs (Lawson, 2002). The model for PECS is derived from a behaviourist model of learning and communication (Bondy and Sulzer-Azaroff, 2002). However the programme acknowledges the criticisms of the highly controlled and artificial approach to developing language skills employed by behavioural programmes and encourages that many opportunities to reinforce spontaneous use of acquired skills be provided outside the original teaching settings. A retrospective study conducted by Bondy and Frost (2002) suggests that the use of PECS does not inhibit the development of speech but may in fact contribute to its development.

Webb (2000) conducted research on the impact of the PECS on pupils with ASDs and moderate general learning disabilities in the UK and concluded that the PECS had a major effect on pupils' communicative skills and behaviour in addition to impacting on how staff worked. Parents also expressed satisfaction with the programme. This is corroborated by practitioner-experience and classroom-based research (Black, 2002). Charlop-Christy et al. (2002) used a multiple baseline design to examine the acquisition of the PECS with three children with ASDs, aged three years and eight months to twelve years. All children had participated in verbal speech training, which had been ineffective in teaching the children to communicate. Children's communication skills improved and collateral gains were recorded in social-communicative behaviours and concomitant decreases were evident in problem behaviour. However the small sample size prevents generalisability of the findings and the lack of a control group challenges the conclusion that the findings were due to the use of the PECS rather than maturation or other environmental variables. Magiati and Howlin (2003) evaluated the use of the PECS in a study where teachers of thirty-four children with ASDs were trained in the approach. Participants had varying degrees of verbal and non-verbal communication abilities. Most participants demonstrated improvements in the use of PECS but less development was evident in general communication skills. Parents reported high levels of satisfaction and a decrease in inappropriate behaviours previously used by children to communicate their needs. The initial phase of the study was characterised by rapid improvement, which subsequently appeared to plateau. The research is limited by the absence of a control group and children could not serve as their own controls as

training had commenced when the baseline rating forms were returned. The timing of the return of baseline data forms and the requisite recording of children's progress at the required time periods by teachers and parents was extremely variable, which resulted in deficiencies and inconsistencies in the availability of baseline and subsequent data. Changes in pupils' communication may therefore be also due to maturation over time or to other factors, such as the educational programmes being used in the schools. Outcome measures were dependant on teacher and parent rating scales and questionnaires and may therefore be influenced by expectations rather than actual change. The fidelity of PECS implementation was not controlled for in different schools, where a variation in teaching techniques and time spent teaching may have occurred.

The efficacy of Responsive Education and Prelinguistic Milieu Teaching (RPMT) and the PECS was explored in research conducted by Yoder and Stone (2006). Each intervention was delivered three times weekly, in twenty-minute sessions, for six months in clinical settings to thirty-six children randomly assigned to interventions. The growth in spoken communication was attributable primarily to the children who participated in the PECS intervention. However pre-intervention object exploration predicted differential responses to the PECS and RPMT. Children with low object exploration made greater progress in RPMT than with the PECS. The research also represents progress in matching interventions to individual characteristics of children with ASDs. Howlin et al. (2007) conducted a randomised controlled trial with eighty-four elementary school pupils with a mean age of 6.8 years. Teachers were provided with a two-day PECS workshop and six half-day, school-based training sessions over a five month period. Rates of initiations and PECS usage increased significantly immediately post-intervention. There was no evidence of improvement in other areas of communication and treatment effects were not maintained once active intervention ceased.

The findings from research studies suggest that the PECS can guide the child into initiating a communicative behaviour, however the numerous repetitions of the behaviour can be difficult to sustain in the classroom environment and the performance of trained behaviour does not equate with the development of

interpersonal communicative motivation (Marwick et al., 2005). Ostryn et al. (2009) constructed a communication competence paradigm related to the skills of generalisation, spontaneity, joint attention ability and maintenance to review and analyse the use of the PECS with individuals with ASDs. Results from the review suggest that the PECS should be supplemented with other communication systems to enable individuals with ASDs to gain full communicative competence. It was observed that communication cannot be equated with manding and tacting and that individuals need to be able to ask questions, develop social closeness and exchange information. A mand can be equated with a request and is described as verbal behaviour followed by a specific reinforcement, while a tact can be equated with labelling and is described as verbal behaviour followed by nonspecific reinforcement (Heflin and Fiorino Alaimo, 2007). Ostryn et al. caution that many factors should be considered when choosing a communication system such as motor abilities, cognitive abilities and age-appropriate communication needs.

### *Augmentative Communication System*

Augmentative systems of communication such as sign, objects of reference, pictures, symbols and written words have been used successfully to assist in developing the communication competency of individuals with ASDs (Jordan, 1985; Jordan and Powell, 1995; Jordan et al., 1998; Seal and Bonvillian, 1997; Porter and Ashdown, 2002). Porter and Ashdown describe objects of reference as objects that represent something in the same way as the spoken word does, for example drink can be represented by cup, home by the key to the front door and horse-riding by a stirrup. Park (1997) cites one of the paradoxes in the use of objects of reference as the distance between the referent and the thing to which it refers and the challenges for individuals in understanding this distance. Porter and Ashdown advise that the objects chosen should be as closely linked as possible to what they represent and that the referent is something that the pupil likes such as a favourite toy in order to give the pupil immediate access to an intensely rewarding activity or object on a frequent basis. Once the pupil demonstrates an understanding of the communicative function of the objects of reference, Porter and Ashdown stress the importance of incorporating choice in the activity.



Peeters (1997) cautions against using sign language as an alternative means of communication for individuals with ASDs as many of the signs are as abstract as the words and there is an absence of a visual connection between signs and their meanings. The evidence that pupils with ASDs benefit from signing is variable and the same type of communication problems occur with sign as with speech for these pupils (Dockrell and Messer, 1999). Hodgdon (1995) notes that manual signing systems are transient, analytical and abstract and will present challenges for pupils with ASDs who have non-transient, gestalt and concrete learning styles. Porter and Ashdown (2002) advise that if pupils lack the supporting skills of memory, fine-motor co-ordination and attention, more positive results may be achieved using concrete items, objects of reference or pictures. However it is recognised that the adoption of a total communication approach increases the possibilities of successful interactions where speech and signs are used in parallel and the purpose of signing as a means of communication is made clear to the pupils (Jordan et al., 1998; Dockrell and Messer). Hodgdon advises that an effective communication system should be based on each pupil's individual needs and contain elements of both systems.

### *Summary of Review of Communicative Approaches*

Kiernan et al. (1982) point out that communication systems can be adopted rapidly by schools, thereby allowing teachers to get systems to pupils with minimal delay. In research conducted on the use of sign and symbol systems in special schools for pupils with moderate general learning disability, severe physical disability, ASDs and aphasia over a three year period from 1978 to 1981, it emerged that decisions to use particular systems in schools were heavily reliant on the courses organised by various proponents of particular systems (Kiernan et al.). Of serious concern in this study was the fact that between twenty-seven to thirty per cent of teachers in the schools did not learn the systems adequately. This suggests a considerable restriction on generality of use, a trait, which is of particular significance to children with ASDs. Schools were also observed to be heavily dependent on course-related materials. While these observations were made in the eighties, they are even more pertinent today where schools are being presented with a variety of commercial communication systems, which may encourage individual teachers to adapt specific systems to the detriment of a systematic whole-school approach to developing pupils' communication skills.

The literature review suggests that effective communication systems have been developed for individuals with ASDs and that schools should adopt an approach, which supports individual pupils' communication needs and succeeds in enabling them to communicate effectively (Golding and Powell, 2001).

### **Social Responsiveness Approaches**

The impairments in social understanding associated with ASDs lead to poor social responsiveness (Aarons and Gittens, 1998). Social stories were developed to assist individuals with ASDs in interpreting, understanding and responding to social situations (Gray, 1994a; Gray and Leigh White, 2002; Blamires, 2001). The choice and relevance of the social situation selected for the social story is dependant on the identified need of the individual to respond in a more appropriate manner in an area of personal importance (Smith, 2001b).

#### ***Social Stories***

Gray and Garand (1993) observe that pupils with average intelligence to moderate intellectual general learning disability who have basic language skills are likely to benefit from social stories. Scattone et al. (2002) suggest that the use of social stories is commensurate with the propensity of individuals with ASDs to rigidly adhere to routines and therefore may be less intrusive than alternative approaches to addressing social skill deficits such as those based on behavioural strategies. Social stories improve social competence through developing social skills and social understanding (Howley and Arnold, 2005). Smith (2003b) advises that social stories may also assist individuals with ASDs in developing personal autobiographical memories.

Gray (2005) describes social stories as an educational tool that enables those working with individuals with ASDs to share information meaningfully and accurately about a variety of concepts, interactions and situations. Gray (1998) suggests that each story should contain descriptive, perspective and directive sentences and recommends a ratio of between two and five descriptive and perspective sentences to every directive sentence in each story. Rowe (1999) advises that a social story should be relevant, easy to understand and contain vocabulary and forms of presentation appropriate to each pupil's age and ability. The social story approach is commensurate with the

visual learning modality of individuals with ASDs and information is presented visually according to the individual's level of visual cognition (Howley and Arnold, 2005). Smith (2001b) cautions that social stories alone cannot teach a new skill but rather provide information and prompt a skill that the child already has, but is not using appropriately.

Comic strip conversations are linked to the concept of the social story and were devised by Gray (1994b) to visually represent the nature of conversation. Simple drawings are used to illustrate ongoing communication through systematically identifying what people say and do and emphasising what people may be thinking. A set of eight symbols is used to represent basic conversational skills and colour can be incorporated to represent the emotional content statements, thoughts and questions. Comic strips rely on the participation of the individual with ASD who is required to co-construct the stories and are designed to improve social understanding through facilitating joint attention and shared-meaning making (Hutchins and Prelock, 2006).

While the research available in relation to the efficacy of social stories and comic strip conversations is limited, a number of case studies and single-subject designs demonstrate that they are proving to be effective in enabling individuals with ASDs to understand the cues and actions specific to targeted social situations (Attwood, 1998). Swaggart et al. (1995) combined social stories with a behavioural social skills training model and reinforcers were used to encourage the desired responses for three children with ASDs. The research participants included an eleven-year old girl who greeted strangers inappropriately and two seven-year old boys who displayed aggression and inappropriate play behaviours. All three children were observed to demonstrate improvement subsequent to intervention. Rowe (1999) used a social story with a Year Two pupil in a large mainstream primary school who was experiencing considerable difficulties with social interaction and communication, was easily distracted by visual stimuli and responded adversely to specific sounds, which he complained hurt his ears. The main concern for school staff was that the pupil was refusing to enter the dining hall to eat lunch with the other pupils. The intervention was monitored closely by all the adults involved for a period of twelve weeks. For the first six weeks, the story was read daily, the frequency was then

gradually reduced and discontinued in the twelfth week. The pupil's appropriate behaviour continued and he also transferred the skills acquired to other situations. A similar intervention was successfully implemented with an eight-year old pupil with ASD in an inclusive second-grade classroom by Norris and Dattilo (1999). A baseline level of inappropriate social interactions occurring during lunch was established and these decreased by approximately fifty per cent from the first to the last day of the social story intervention. Kuttler et al. (1998) successfully used social stories to reduce the precursors to tantrum behaviour at morning work time and lunchtime for a twelve-year-old boy with ASD. Similar research evidence is available that supports the use of social stories in developing the social competence of individuals with ASDs (Smith, 2001b; Scattone et al., 2002; Bledsoe et al., 2003; Agnosta et al., 2004; Hutchins and Prelock, 2006; Reynhout and Carter, 2007).

#### ***Summary of Review of Social Responsiveness Approaches***

Kuttler et al. (1998) conclude that it may be the case that some pupils with ASDs require visual interventions along with directions, choices or rationale to transition or manage their own behaviour. The authors suggest that the effectiveness of the social story may be linked to the fact that it combines these elements to inform the pupil how to react in specific social situations. Critical components can be identified from the research on social stories and include the importance of gathering information prior to devising the story, identifying the individual's areas of motivation, identifying an individual's level of social understanding, employing visual cues, reading the stories frequently and with consistency and considering that modifications may be necessary to address idiosyncratic responding to the stories as they are initially written. Many of the research studies are small scale and the simultaneous use of other approaches makes it difficult to ascertain the precise impact of the social stories. I concur with Howley and Arnold (2005) that the studies that have been conducted to date are helpful in developing a body of knowledge in relation to the efficacy of this approach.

#### **Interactive Approaches**

Jordan and Jones (1999) describe interactive approaches as those that emphasise, "the importance of developing a relationship and communication between the child

and his/her parents and/or staff” (p.103). Interactive approaches focus on developing the social-communication tendencies of pupils with ASDs and seek to enable them to initiate communicative acts for their own social ends (Mundy and Crowson, 1997; Learning and Watson, 2006). Porter and Lacey (2005) observe that interactive approaches developed in part as a reaction from those concerned with what they perceived as a reductionist view of learning characterised by structured prescriptive approaches.

### *Intensive Interaction*

Nind (1999) describes intensive interaction as an approach that is aimed at, “facilitating the development of the most fundamental social and communication abilities” (p.96). The approach is based on naturalistic processes and developmental principles and requires the teacher to adjust his/her interpersonal behaviours based on feedback from the learner (Nind and Hewett, 2001; Kellett and Nind, 2003). Figure 3 below summarises the key processes in caregiver-infant interaction that are utilised in the process of intensive interaction.

Intensive interaction considers that learning to communicate is not analogous with learning a basic skill that can be task-analysed and its constituent skills taught in a structured learning programme (Nind, 1999). A pattern emerges whereby as in good caregiver-infant communication, the interactions gain their own momentum and the process sustains itself (Nind and Hewett, 1998). The emphasis on learning communication and sociability in naturalistic and incidental contexts may assist in mitigating the difficulties individuals with ASDs exhibit in the generalisation of skills learned to real life situations (Wimpory et al., 1995)

An examination of a number of case studies and single-subject research designs suggests that participation in interactive approaches can effect progress in pupils’ social and communicative abilities (Kaufman, 1976; Kaufman, 1994; Knott, 1998; Nind, 1999; Taylor and Taylor, 1998; Nind and Hewett, 2001). A three-year case study conducted with a ten-year old pupil with a moderate general learning disability and ASD demonstrated successful outcomes in terms of increased sociability, an ability to initiate communication and a decrease in self-absorbed and perseverative

behaviours (Knott). Taylor and Taylor reported a decrease in their twelve-year old son's challenging and self-stimulating behaviours following the use of a programme based on intensive interaction.

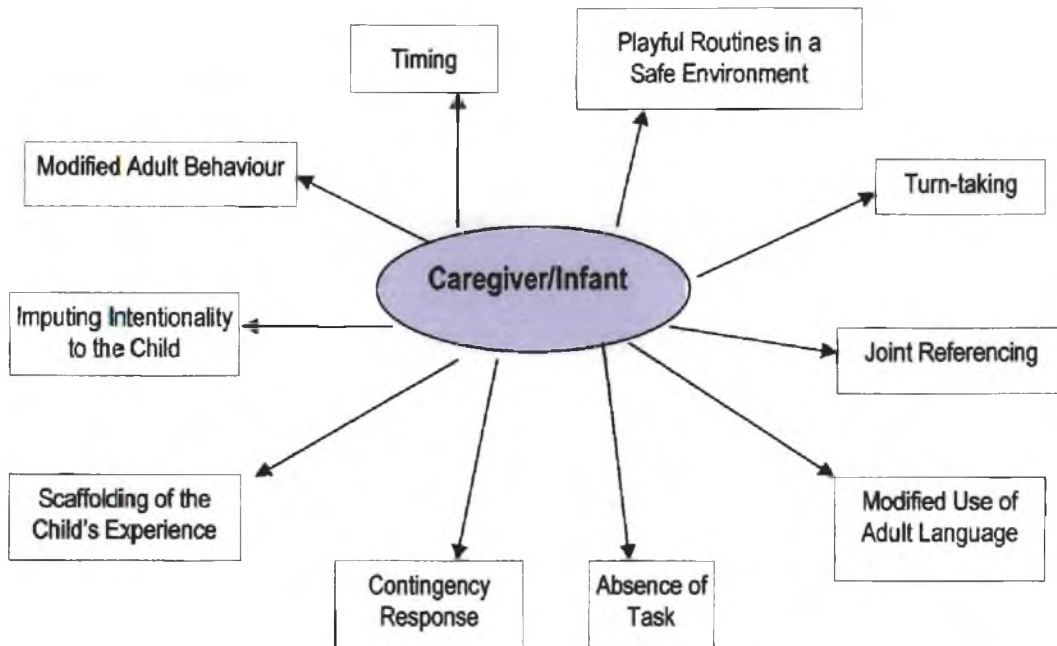


Figure 3. Processes in the Caregiver-Infant Dyad Utilised in Intensive Interaction

### *Play*

The play of children with ASDs has been observed to lack spontaneity, flexibility and a social dimension (Claiborne Park, 1982; Gerland; 1996; Jordan, 2001). The ritualistic, solitary and object-oriented play of children with ASDs is described by Behl Wulff (1995) as behaviour that differs in its topography, pleasureableness and complexity from delayed play. Play has been described as the leading source of development in pre-school years for typically-developing children (Rousseau, 1964; Vygotsky, 1966). Vygotsky suggests that action in the imaginative sphere, the creation of voluntary intentions and the formation of real-life plans and volitional motives make play the highest level of pre-school development. Play contributes to children's cognitive, social, emotional and linguistic development (Rogers, 1999; Beyer and Gammeltoft, 2000; Seach, 2002; Greenspan and Wieder, 2006). Children with ASDs are therefore deprived of critical developmental experiences associated with play.

Research has demonstrated that children with ASDs demonstrate potential for both symbolic and functional play in elicited and purposefully structured contexts (Lewis and Boucher, 1988; Lewis and Boucher, 1990). The inherently rewarding nature of playing with LEGO® building materials has been used successfully to develop children's social adaptation and social competence in structured interactive play groups (Legoff and Sherman, 2006). The development of play was identified as a key factor of the success criteria and core components in successful early intervention for children with ASDs (Medhurst and Clay, 2008). Bernard-Opitz et al. (2004) compared behavioural and natural play interventions, using a sample of eight children in matched groups of four in a crossover design, which controlled for sequence of interventions. After ten weeks, improvements were evident in play, attention, compliance and communication measures with attending and compliance measures higher where behavioural followed play intervention. Significantly the authors found that the two children with the lowest cognitive levels and who received least parental involvement demonstrated no improvement. While the research demonstrates the possibilities of developing the play of children with ASDs, the small number of participants, sequential design of the research, the blurred distribution of teaching methods and the expertise of the trainers and those delivering the programmes prevents generalisation of the findings (Bernard-Opitz et al.; Marwick et al., 2005).

### ***Summary of Review of Interactive Approaches***

Porter and Lacey (2005) acknowledge the difficulties in evaluating an approach that provides summative data on outcomes and less data on an analysis of the process, which precludes us from developing an in-depth knowledge of how the new learning emerged. Research on the effectiveness of interactive approaches is largely based on small case studies and anecdotal evidence (Jordan et al., 1998). The Clinical Practice Guidelines published by the New York State Department of Health concluded that there was no evidence that interventions based on the developmental individual difference relationship were effective as interventions for young children with ASDs (New York State Department of Health, 1999). I concur with Ware (2005) that while further research is necessary, the current evidence available supports the use of intensive interaction in developing communication, increasing involvement in positive social behaviours and in reducing stereotyped behaviour. Through providing

detailed descriptions of the process and directing attention to planning in relation to objectives, tasks, checklists, time-tabling and recording and monitoring of pupils' progress, many of the criticisms articulated in relation to this approach may be rectified (Nind and Hewett, 1998; Nind and Hewett, 2001; Porter and Lacey). The literature further demonstrates that children with ASDs will engage in conventional play activities if supported and directed. Carefully structured individualised play programmes have the potential to enable children with ASDs to develop their emotional, intellectual, perceptual-motor and social functioning in enjoyable and naturalistic learning contexts.

### **Inclusion Approaches**

The increasing number of pupils with ASDs being educated in mainstream schools presents challenges in relation to facilitating their placement, participation, acceptance and achievement (Humphrey, 2008). A range of approaches that utilise inclusion as the learning medium has been used successfully to enable pupils with ASDs to participate in activities with their peers who do not have ASDs.

#### ***Learning Experiences, and Alternative Program for Preschoolers and their Parents***

The Learning Experiences, and Alternative Program for Preschoolers and their Parents (LEAP) programme comprises three components: an integrated preschool, a behaviour skills training programme for parents and national outreach training activities (Dawson and Osterling, 1997). This programme operates for three hours a day, five days a week, for twelve months of the year (Strain and Cordisco, 1994). Classrooms contain sixteen pupils (ten pupils who do not have ASDs and six pupils with ASDs aged three to five years). The curriculum consists of a blend of typical preschool activities and is adapted for children with ASDs only if necessary. Peer models facilitate the development of social skills, language skills and appropriate behaviour. A study conducted by Odom and Strain (1984) concluded that targeted peer-initiation procedures augmented by a teacher-antecedent condition increased the social responses of three four-year old children with ASDs.

Interventions are conducted across school, home and community environments and are planned, systematic and individualised. The curriculum reflects a behavioural and



a developmentally appropriate approach. Strain and Cordisco (1994) point out that while many of the children have shown great improvement both during and after their involvement in the programme, others have not. The authors are continuing to conduct research into the variables that contribute to differential outcomes for individual children.

### *Social Skills Programmes*

A variety of approaches has been developed to enable children with ASDs to interact appropriately with their peers who do not have ASDs. Without systematic intervention, pupils with ASDs may encounter substantial difficulties stemming from their problems with social interaction (Whitaker et al., 1998). The authors established six circles of friends to support pupils in years three to ten in mainstream schools and one circle in a school for pupils with mild general learning disabilities. Each circle had a focus pupil with ASD. According to Whitaker et al. the circle of friends does not aim at creating friendships but rather at forming, developing and improving pupils' social skills, which may lead later to the formation of friendships. The authors aimed to create a milieu where the pupil is in regular and supportive contact with more socially competent peers, to allow the teacher to target the impairment of social interaction and to increase peers' understanding of the fundamental and pervasive difficulties of ASDs. Outcomes were positive and included improved social integration and higher levels of peer contact, reduced anxiety, improved behaviour and increased levels of empathy and improved understanding of pupils with ASDs. Similar comparative research was conducted with five pre-school pupils with ASDs, three in the intervention group and two in the control group (Kalyva and Avramidis, 2005). A circle of friends approach was applied daily for a thirty-minute period in a pre-school setting for a period of three months with the active involvement of one teacher and five peers of each pupil with ASDs. Pupils in the intervention group demonstrated significantly higher successful response and initiation rates at post-intervention and follow-up than those in the control group. Roeyers (1995) points out that as circle of friends does not aim at teaching language skills, it is also appropriate for pupils who have language difficulties or who do not communicate verbally. Kalyva and Avramidis advise that in these circumstances, the activities of the circle should focus on engagement with objects or actions instead of verbal behaviour. Organised play activities during break-time with a pupil with AS in a primary school

increased the pupil's participation with his peers significantly and decreased the amount of time he had been observed to be spending alone (Fennell, 2008).

Motivational techniques based on pivotal response training were used successfully to increase social initiations and turn taking in two elementary school children with ASDs during recess periods (Harper et al., 2008). Scott (2009) describes a whole-school approach to the inclusion of a pupil with ASD in a mainstream primary school in the Republic of Ireland with an enrolment of approximately 430 pupils. The successful inclusion of the pupil was achieved through systematic planning, employing a whole-staff collaborative approach and involving parents in the process. Accommodations and modifications in the content, delivery and organisation of the curriculum were critical to including the pupil. The author highlights the importance of engaging in ongoing observation in order to promote reflection and analysis, which leads to improved inclusive practice. Humphrey (2008) suggests that the relationships pupils with ASDs have with their peers can constitute both a barrier and an enabler to their successful inclusion in school. Providing targeted and accurate information with regard to ASDs for peers improved their understanding, behaviour and attitude towards their peer with ASD and enabled the pupil with ASD to experience school more positively (Gus, 2000).

### *Summary of Review of Inclusion Approaches*

Inclusion approaches specifically seek to redress the triad of impairments associated with an assessment of ASDs and provide opportunities for pupils to access the curriculum alongside their mainstream peers. However it is clear from the research studies that direct teaching of targeted skills must occur in the inclusive settings and that mere exposure of pupils to each other is not sufficient (Jordan et al., 1998). Engaging in detailed planning, adopting a whole-school collaborative approach and providing for differentiated curriculum experiences are identified as factors that contribute to successful inclusion. Promoting peer-understanding of ASDs has the potential to impact positively on providing for successful inclusion (Humphrey, 2008). Greenway (2000) concludes that more research is required in order to assess the quality of the social interactions possible in inclusive settings and to indicate the best ways of maintaining the development and generalisation of social skills over a longer period of time.

## **Discrete Approaches**

A discrete approach is one that purports to provide a comprehensive approach to the learning and teaching of individual pupils with ASDs (Jordan et al., 1998). The TEACCH approach can be described in terms of a discrete approach.

### ***The TEACCH Approach***

The TEACCH approach is a state-wide programme in North Carolina, in the US for children and adults with ASDs and communication disabilities (Jordan et al., 1998). The rationale for the approach is based on research, which suggests that pupils with ASDs progressed better in structured rather than unstructured environments (Schopler et al., 1971; Schopler et al., 1995). Ernsperger (2003) points out that both the TEACCH approach and ABA are behaviourally based. However she points out that the TEACCH approach is not based on artificial contingencies as the rewards are built into the activities and it has broader implications beyond instructional strategies. Cox (2006) conceptualises the cognitive-behavioural approach that underlines the TEACCH approach in terms of an iceberg metaphor in Figure 4 below.

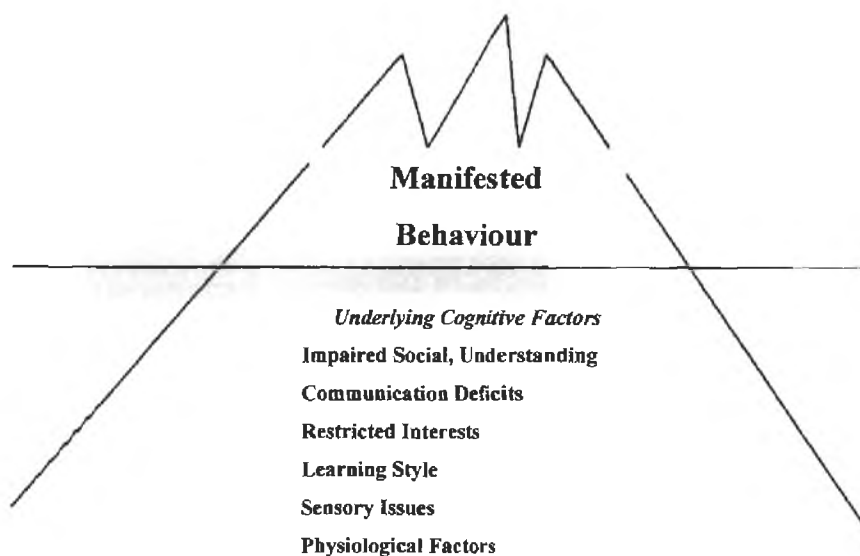


Figure 4. Iceberg Metaphor Adapted from Cox (2006)

Optimum structural adaptation is carried out using two primary strategies, improving

skills through structured education and modifying the environment to accommodate deficits (Schopler, 2001). A knowledge of the characteristics, cognitive and behavioural patterns of individuals with ASDs informs the learning programme (Cox, 2006). The TEACCH approach comprises five key components, which involve organising the physical environment, developing daily schedules/time-tables, devising work-systems, using visually clear materials and visual cues for generalisation and establishing positive and productive routines (Ernsperger, 2003).

Directions, prompts and reinforcers are used as part of the pupils' learning programmes, which focus on the strengths related to ASDs. These strengths include skills with visual processing, reliance on rote memory routines and special interests. Structured teaching can be adapted to different levels of developmental function according to individual needs. Objects of reference, photographs, symbols and words may be used in visual timetables (Porter and Ashdown, 2002).

The TEACCH approach has been reported to be successful in neutralising deficits associated with ASDs, preventing behaviour problems and promoting independence (Schopler et al., 1995). In a case-based evaluation of the TEACCH approach with eleven pre-school children, gains were reported on a wide range of motor, perceptual and cognitive processes for all children (Sheehy, 2001). Research conducted by Hume and Odom (2007) examined the effects of the TEACCH work system on the independent work and play skills of three pupils with ASDs. All pupils showed increases in on-task behaviour, increases in the number of tasks completed or play materials utilised and reduction in the requirement for teacher-prompting. These results were maintained in the one-month follow-up period. The TEACCH approach and an inclusion model were compared with two groups of eight pupils with ASDs in Italy. The scores of the group accessing the TEACCH approach demonstrated statistically significant differences in imitation, perception, gross motor skills, hand-eye co-ordination, cognitive performance and developmental age after one year of intervention (Panerai et al., 2002). However the effects of the programme alone cannot be separated from the effects of the settings in this research as the TEACCH group received intervention in a residential institute (Marwick et al., 2005).

### ***Summary of Review of Discrete Approach***

It has been observed that despite the progress demonstrated in the highly structured TEACCH environment, concerns have been expressed that pupils may not generalise their communication skills to other environments (Dockrell and Messer 1999; Porter and Ashdown, 2002). While the TEACCH approach is one of the longer-established programmes, there remains an absence of systematic research in terms of outcomes of the programme (Jordan et al., 1998; Tsang et al., 2007). A need for larger controlled studies, the use of control groups, evaluators who are blind to the purpose of the research, more detailed information with regard to the research participants prior to intervention and longitudinal studies with follow-up at multiple points has been identified.

### **A Mosaic of Approaches**

There have been many claims for the effectiveness of specialist approaches to the learning and teaching of pupils with ASDs (Heflin and Simpson, 1998a; 1998b; Brooks, 2006; Preis, 2007). The Task Force on Autism examined a range of research and concluded that there was no definitive evidence that supported a particular approach for all individuals with ASDs (DES, 2001). Heflin and Simpson (1998a) reviewed the most frequently used ASD interventions and found that there was no single method that should be used exclusively to meet the varied needs of children and youth with ASDs and their families. The authors suggested that the most effective programmes for individuals with ASDs were those that incorporated a variety of evidence-based best practices. Simpson (2004) considers that there is no single universally best suited and effective method for individuals with ASDs and that the best programmes incorporate a variety of multi-disciplinary best practices based on individual needs. This is commensurate with the view of Burack et al. (2004) that empiricism in research with individuals with ASDs should be conceptualised within a “mosaic” framework that allows for a series of smaller scale findings based on different theoretical frameworks. Iovannone et al. (2003) similarly conclude that educators and parents should incorporate a variety of strategies that are best suited to each child’s unique characteristics. It is also important to acknowledge that the types of interventions used may change over time in accordance with the individual’s age and stage of development (Campbell et al., 1996). Crucially there is no definitive research that can match a child to a particular approach and

consequently there is a need to carefully describe each individual characteristic and provide the associated appropriate interventions (Koegele and Brown, 2007). Stephens (2005) suggests that an examination of autism intervention across theory and practice provides a direction for programme planning rather than definitive evidence to support a single theory base.

The literature reviewed suggests that all approaches can demonstrate effectiveness at some level and that approaches are not mutually exclusive. It is clear that behavioural approaches have continued to evolve from an exclusive focus on discrete trial training to employing naturalistic strategies that can be applied in classroom environments as is evidenced in PRT, PECS, TEACCH, RPMT and incidental teaching. Naturalistic strategies are also evident in the use of interactive approaches. The focus on providing clarity in structuring pupils' learning, which is characterised by the TEACCH approach is also evident in inclusion approaches and social stories. The findings of the literature review suggest that the current focus of comparing exclusive intervention models, has failed to yield definitive conclusions in favour of a specific intervention model. However the literature review also suggests that while the theoretical bases of intervention models purport to be mutually exclusive, a merging of strategies is evident between these models.

This finding has the potential to reduce the current polemic debate that exists between the merits of different approaches and move towards isolating the elements and components of intervention models that can be used successfully in optimising outcomes for pupils with ASDs. Additionally it has the potential to contribute to the many gaps in knowledge with respect to methods and interventions that demonstrate "best outcomes" (p. 15) for the person with ASD identified in the international review of literature conducted by Parsons et al., 2009. The use of empirically-based strategies was one of five areas considered as an essential component of ASD programmes in a social validation survey conducted with parents, teachers and administrators (Callahan et al., 2008). Individualised planning, data collection, active collaboration and a focus on long-term outcomes were also considered essential. Recently research findings suggested that comprehensiveness in public school ASD programmes in the US require an investigation of the impact of specific programme

components (Callahan et al., 2009). The findings of the literature review conducted in this chapter are commensurate with this finding.

### **Conclusion**

Parsons et al. (2009) acknowledge that there is insufficiently strong evidence to promote a specific type of intervention or approach for all children and families and recommend that a range of interventions should continue to be provided. The authors further advise that practitioners require specialised knowledge and understanding of ASD and should have ongoing access to CPD. This is consistent with the literature reviewed in relation to the need for teachers to develop an understanding of the nature of ASD and the associated implications for the learner (Powell and Jordan, 1993). Research suggests that without adequate CPD, teachers experience feelings of self-doubt and anxiety regarding their abilities to meet the needs of pupils with special educational needs (Janney et al., 1995). Teachers therefore require CPD in both theoretical development and teaching techniques in order to enable them to conceptualise teaching challenges and thus implement informed teaching approaches (Jennett et al., 2003). The literature reviewed to date has highlighted the criticality of CPD for teachers of pupils with ASDs. Chapter Six will consider the issues involved in constructing a framework for evaluating the aims and outcomes of CPD programmes and contextualise the development of CPD in special education and ASD in Ireland.

**CHAPTER SIX**  
**LITERATURE REVIEW FIVE**  
**CONTINUING PROFESSIONAL DEVELOPMENT**

**Introduction**

The literature reviewed suggests that teachers require specialised knowledge and understanding in implementing learning and teaching programmes for pupils with ASDs (Powell and Jordan, 1993; Parsons et al., 2009). It is essential therefore that teachers access ASD-specific programmes of CPD. Teachers' CPD is increasingly being considered as a means of effecting educational change and improving pupils' outcomes (Ashdown, 2001; Guskey, 2002). A report on research in attracting, developing and retaining effective teachers in twenty-five countries worldwide, including Ireland, identified qualitative deficits in teachers' knowledge and skills, deficient links between teacher education and schools and a lack of systematic induction procedures (Organisation for Economic Co-operation and Development (OECD), 2005). The report concluded that there was a need to shift the emphasis from ITE to induction and inservice education, to place a greater emphasis on the development of reflective practice and field-research skills, to create teacher profiles encompassing a broad range of teacher competencies and to enrich teachers' experiences in schools. Parental demands and significant fiscal investment by government in special education continue to raise expectations and require teachers that are appropriately qualified. O'Gorman et al. (2009) suggest that the importance of high quality teacher education programmes to ensure optimum quality learning experiences for pupils with special educational needs cannot be overstated. The authors consider that the content, methodologies and assessment of these programmes must be rigorously evaluated and continually improved.

I have deliberately chosen to use the term CPD rather than inservice, lifelong learning or teacher learning. I concur with Sugrue et al. (2001) that "inservice" conveys the concept of developing the role of the teacher as expert and has the effect of perceiving learners as passive, "lifelong learning" encompasses more than learning for teaching and while "teacher learning" focuses on learning, it omits a reference to teachers' professionalism. These terms will therefore only be used when specifically



referred to in the literature. Continuing professional development encompasses all the activities teachers engage in during the course of their career, which are designed to enhance their work (Day and Sachs, 2004). Hogan and Smith (2007) describe CPD as a series of incremental upskilling activities that occur in a teacher's career designed to meet the emergent requirements of educational systems or alternatively as an enrichment of the daily environments of learning and teaching in schools and colleges. I accept that changing teachers' practice is enormously intricate, a single prescription cannot be applied to all teachers and schools, context is a key consideration, school leaders and teachers are central to the change process, which is best described as interactive and dynamic rather than linear, sequential and predictable (Sugrue et al.). I concur with Day and Sachs that CPD is a deceptively simple descriptor of a complex intellectual and emotional endeavour, which is critical to raising and maintaining standards of learning, teaching and achievement in schools. McKay and Dunlop (2004) observe that while there has been a marked increase in research related to ASDs, literature of specific relevance to training remains scant. In this chapter, literature relevant to CPD generally and to meeting the needs of pupils with special educational needs in addition to the less prolific body of literature directly related to CPD in the area of ASDs will be examined. I concur with Fullan (1995) that it is necessary to develop a coherent focus that provides a theoretical framework for evaluating the aims and outcomes of CPD.

### **A Framework for Evaluating the Aims and Outcomes of Continuing Professional Development**

Bolan and McMahon (2004) advise that a broad theoretical framework of CPD is necessary in order to merge the wide range of conflicting models of CPD in the literature. Grundy and Robison (2004) suggest that CPD serves the three principal functions of extension, renewal and growth, which are driven by both systemic and personal needs. The application of these functions to the aims and outcomes of CPD comprise an element of the evaluative theoretical framework developed for this research study as illustrated in Figure 5 below. The aims of CPD can be linked to advancing the competitive purposes of social and economic policy, school improvement priorities and individual growth (Logan and Sachs, 1991). A typology of CPD outcomes as they impact on teachers' motivation and attitude, knowledge

and skills and practice is adopted by Powell et al. (2003). Day (1999) suggests that CPD may succeed in accelerating additive growth, in relation to progressing knowledge, skills and understanding, or effecting transformative growth, resulting in major changes in beliefs, knowledge, skills and understanding. Through combining the theoretical positions adopted by Logan and Sachs, Grundy and Robison, Powell et al., and Day the research will consider whether extension, renewal and growth have occurred in relation to the aims and outcomes of CPD. The combined evaluation framework illustrated at Figure 5 below is sufficiently flexible to allow for the emergence of additional related themes in accordance with the theoretical basis of grounded theory (Glaser and Strauss, 1968). The areas of impact of CPD will be used specifically to inform the research instruments as they relate to the learning and teaching of pupils with ASDs.

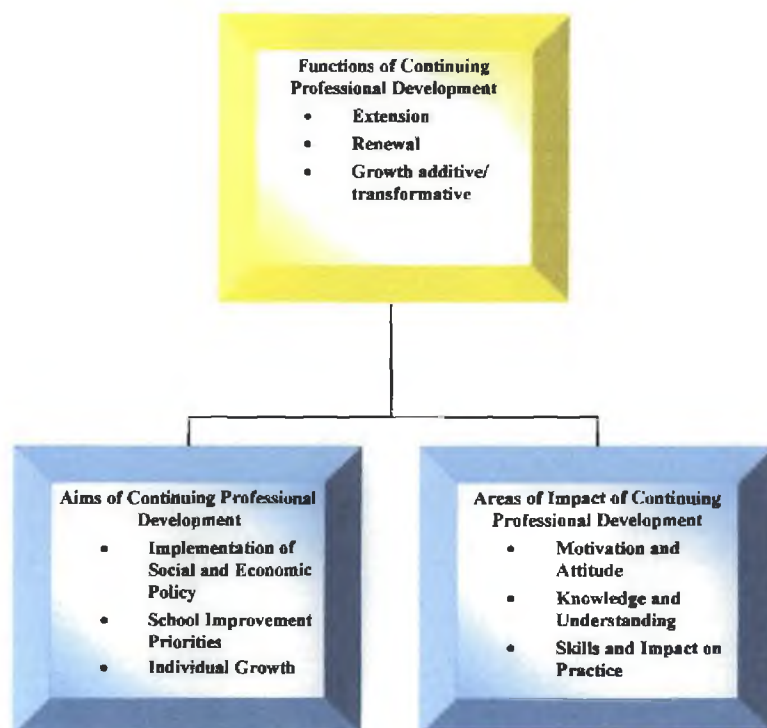


Figure 5. A Framework for Evaluating the Aims and Outcomes of Continuing Professional Development

## **Areas of Impact of Continuing Professional Development**

### ***Motivation and Attitude***

Teachers' motivation and attitudes are greatly influential in determining the intellectual, social and emotional development of pupils and have been identified as key factors in effecting successful inclusive education (Firestone and Pennell, 1993; Brownell and Pajares, 1999; Avramidis and Norwich, 2002; Lindsay, 2007). Improving professional self-efficacy and decreasing burnout have been identified as critical to combating attrition and improving conditions for teachers in the field of special education (Jennett et al., 2003; Hodkinson, 2006). Research conducted by Jordan et al. (2009) suggests that effective inclusionary practices, depend in part on the beliefs of teachers about the nature of disability, and about their roles and responsibilities in working with pupils with special educational needs. Jennett et al. identified that a commitment to a theoretical orientation in teaching pupils with ASDs is related to teacher perceptions' of higher professional self-efficacy and lower burnout.

An early review by Donaldson (1980) suggests that information-based approaches alone to improving attitudes towards individuals with disabilities are not always successful and may result in no change or a negative change in attitude. Donaldson observes that there are difficulties in identifying the dynamics of attitude change because of non-specificity of informational content and/or possible confounding of information with direct contact with or media exposure to disabled persons, analysis of the nature of the prejudice, or instructor personality and attitudes. This is corroborated by research conducted by Hastings et al. (1996), which concluded that information-based approaches to changing student teachers' perceptions of children with severe learning difficulties are unlikely to be effective unless they are accompanied by contact with children in structured teaching contexts as part of students' practical teaching experience. Donaldson postulates that an increase in the total input of informational cues related to powerfully presenting a message, utilising live rather than audio or videotaped presentations, ensuring presenter credibility, providing non-stereotypical images of disability leads to more positive attitude formation. According to Donaldson, contact with disabled persons per se does not

necessarily produce positive, non-stereotypic attitudes, however exposure to disabled persons of equal or valued status may be an important factor in effecting positive attitude change. Chazan (1994) concludes that CPD can, if appropriate and well presented, assist in modifying negative attitudes to children with emotional and behavioural difficulties.

Guskey (2002) suggests that teachers need to acquire evidence of improvements in pupil learning before any significant change in teachers' attitudes and beliefs will occur. He proposes a model of teacher change where professional development is followed by a change in teachers' classroom practices, which generates a change in pupils' learning outcomes and thereby changes teachers' beliefs and attitudes.

### *Knowledge and Understanding*

Three conceptualisations of knowledge that include knowledge for practice, knowledge in practice and knowledge of practice, have been suggested by Sugrue, et al. (2001). Implicit in a view of knowledge for practice is that there is a readily identifiable and verifiable concept of best practice that can be disseminated widely through a series of lists of what makes for effective schools. An emphasis is placed on developing a competency-based approach to professional development. Schön (1987) criticises this view of knowledge and suggests that it is deficient when applied to the kinds of competencies practitioners display in unique, uncertain, and conflicted situations. I concur with Schön and propose that such a conceptualisation of knowledge is inherently defective and inadequate in CPD programmes for teachers of pupils with ASDs. Knowledge in practice is described by Sugrue et al. as being concerned with developing a reflection-in-action that is linked to what Schön refers to as "professional artistry" (p. 22). Professional development is viewed as providing occasions for teachers to reflect critically on their practice and to generate new knowledge and beliefs about content, pedagogy and learners (Darling-Hammond and McLaughlin, 1995). Knowledge of practice extends the agenda to enabling a transformation of the social and intellectual life of the school while also acknowledging the wider social forces outside the school (Sugrue et al.). A coherent model encompassing the three conceptualisations of knowledge should inform CPD programmes in order to ensure that understanding is adequately developed. I concur

with Lewis and Norwich (2005) that knowledge should incorporate four foci related to the nature of the group with special educational needs, a teacher's professional identity and self-knowledge, the psychology of learning and a knowledge of curricular areas and general pedagogic strategies in meeting the needs of pupils with special educational needs.

### *Skills and Impact on Practice*

Blatt (2001) contends that CPD for teachers should enable practising teachers to improve their learning, teaching and professionalism. Difficulties have been identified however in evaluating the exact nature of the impact of CPD on pupils' learning as the complexities involved in the interplay between learning and teaching are not easily isolated (Powell et al., 2003; Killion, 2008). Brownell et al. (2005) observe that research on special education teacher education is virtually nonexistent and articulate a need for a research-based link between teacher education programme components and teacher and student outcomes. This concurs with research conducted by Rhodes and Houghton-Hill (2000) who advise that further more focused research is necessary in this area. However CPD has been identified as impacting on a range of other key areas, which have the potential to impact positively on pupils' learning.

Jordan and Jones (1996) suggest that awareness training enables teachers to understand and accommodate the behaviours of pupils with ASDs. McKay and Dunlop (2004) refer to a case study of a teacher of Mathematics in a secondary school who had a pupil with AS in his class and following a web-based autism course felt he understood the pupil's behaviour better. McKay and Dunlop emphasise the need for a clear relationship between the professional role and the level of training required. Research conducted by Tait and Dunlop (2005), assessing the impact of a multi-professional post-graduate study of ASDs on practice in the field indicated that benefits accrued to participants in terms of increased knowledge, development of practice, multi-professional aspects, confidence and professional development and service development. In a Scottish Study examining the training needs of thirty-eight professionals, the majority who were interviewed referred to the benefits of attending in-service days and conferences, which assisted them in meeting the needs of individuals with ASDs (Watson, 1995). Powell et al. (2003) engaged in

a two-phased study to elicit primary and secondary school teachers' perceptions of the impact of a BA or MA Education Programme at individual, classroom and organisational levels. Forty-nine questionnaires were returned, representing a fifty per cent response rate. Phase two of the study explored specific themes emerging from the questionnaires in semi-structured interviews with six teachers, four school principals and one deputy principal. Impact on practice related to teachers' ability to make more refined value judgements, using theory to inform critical thinking in relation to practice and adopting an analytical approach to the curriculum. Identified gains for pupils were described in terms of pupils being provided with a wide range of learning and teaching experiences. Conversely in a recent small-scale study concerned with including a student with ASD in a mainstream second-level school, Dorricott (2006) observed that theoretical knowledge may have no practical impact on a school's planning strategies or a staff's attitude to pupils with ASDs. While the staff at the school in question was well informed in relation to ASD, practice did not always reflect this. This highlights the challenge for programmes of CPD of emphasising the importance of translating theoretical input into school-based practice.

### **The Development of Continuing Professional Development in Ireland**

While there may be international trends in conceptualisation, policy development, delivery, foci and effectiveness of CPD, it is also critical to understand the traditions and cultures of schooling that are unique to each system (Sugrue et al., 2001). In 1991, the OECD criticised the lack of continuing inservice education and training for teachers in the Irish Education System (OECD, 1991). The Report on the National Education Convention subsequently identified a need for a more extended and structured provision of inservice education (Coolahan, 1994). The White Paper acknowledged the OECD 1991 report and referred to teacher education as a continuum comprising quality initial training, well-managed structured induction and in-career training programmes (Ireland, 1995). It was acknowledged that while a wide range of activities was being undertaken, provision was fragmented, involved voluntary participation only and course content was mainly determined by course providers. Programmes to assist teachers in enabling pupils with learning difficulties and special educational needs were identified among the priorities for development.

A policy position was articulated that included the need to plan systematically, balance personal and professional needs with system-wide goals and engage in ongoing review.

In Ireland, at the level of the DES, responsibility for the CPD of teachers was managed by the In-Career Development Unit (ICDU) from 1994 (Egan, 2004). In May 2004, following a restructuring process, the ICDU was renamed Teacher Education Section (TES) and assigned increased responsibilities in relation to ITE, induction and in-career development. Currently TES has responsibility for policy formulation, co-ordination and management of teacher-CPD at both local and national level. During the past decade the professional development of teachers in Ireland has received considerable attention from central government and a range of initiatives has been implemented. Egan points out that the financial assistance of the Human Resources Operational Programme (HROP) and the European Regional Development Fund (ERDF) of the European Union assisted the government in implementing policy objectives related to supporting curriculum reform, enhancing principals' skills as leaders and managers of school-based change, developing teachers' skills in providing for pupils with special educational needs, facilitating the effective management of schools and the fuller involvement of parents in the education of their children. Egan describes the rationale for these objectives as the entitlement of all Irish children to education of the highest quality. However Logan and Sachs (1991) suggest that where inservice education and training is supported by governments and state agencies competitive purposes related to social and economic policy, school improvement priorities and individual growth underpin the inservice training agenda, which may result in conflicting CPD demands to accommodate different needs. I concur with Fullan (1993) that conflict is intrinsic to successful educational reforms and agree that often differing demands of local, national and transnational power relations have a profound influence on CPD policy and practice (Sugrue 2004).

The recent pace of economic, social and cultural change has coincided globally with national education policy makers responding to demands for educational reform through increasing the emphasis on teacher professional development (Guskey and

Huberman, 1995; Sugrue, 2004). Sugrue contends that teacher professional development is perceived as the solution to the demands for school reform, which are driven largely by national government concerns for economic competitiveness in the global economy. He refers to the role of Brussels as the centre of the European Union formulating and disseminating a rhetoric of lifelong learning and setting a uniform professional development agenda for member states. This increasing homogenisation and prescriptive approach Sugrue cautions is in danger of eroding teacher autonomy and undermining career commitments and trajectories. Day and Sachs (2004) refer to these developments as promoting a culture of managerial professionalism, which is system driven, externally regulated, linked to the reform agenda, serving political ends, competitive and market driven and characterised by control and compliancy. The findings of the literature review suggest that research on CPD should continue to articulate these conflicting discourses in order to ensure that the personal and professional development of teachers and the learning and teaching needs of children are not compromised.

### **Continuing Professional Development for Teachers of Pupils with Special Educational Needs**

The Special Education Review Committee stated that it was convinced that one of the most important variables in determining the success of special education provision was the quality of teachers (Ireland, 1993). The quality of teachers was stated to be related to innate, natural abilities and the quality of initial and further specialist training. A need to develop a co-ordinated approach to the education and training of teachers to meet the needs of pupils with special educational needs in all school environments was identified. Relatively little time is available in ITE courses to provide prospective teachers with sufficient knowledge and skills to meet the needs of pupils with special educational needs (Kearney and Durand, 1992; Chazan, 1994; McIntyre, 2009). Initial teacher education in Ireland is at graduate level and comprises in-depth pedagogical study, intensive practicum and strong undergraduate preparation in the constituent disciplines (Darling-Hammond, 2005). The Report of the Commission on the Status of People with Disabilities reiterated the importance of teacher education for optimising outcomes for pupils with special educational needs and advised that all initial and continuing teacher education programmes should



include modules on meeting the needs of pupils with disabilities (Department of Equality and Law Reform, 1996). Research conducted by the DES, which examined the views of newly qualified primary teachers in their first year of teaching, identified a need for teachers to develop competencies in relation to planning individual programmes for pupils with special educational needs (DES, 2005c). This is further supported by research, which found that newly qualified primary teachers at the end of their initial year of teaching identified special education as one of the key areas in which they required additional support (Killeavy and Murphy, 2007). Hodkinson (2006) observes that when ITE does not facilitate the requisite level of knowledge, understanding and skills required to teach pupils with special educational needs, newly qualified teachers' views in relation to inclusion may be negatively impacted on. Research conducted by the OECD on teacher education policy issues in twenty-five countries, including Ireland, indicates that it is preferable to improve induction and teacher development throughout teachers' careers rather than increasing the length of ITE (OECD, 2005). In order to effect valued outcomes for pupils' learning, the literature suggests that teachers should be provided with opportunities to engage in processes of review, renewal and enhancement of thinking and practice that focus on professional, individual, collective, inquiry-based and technical needs (Hargreaves, 1994; Day, 1999). The importance of providing CPD for teachers of pupils with special educational needs is consistently referred to in DES documents (DES, 2005c; 2005d; 2005e; 2006b). An examination of DES circulars, reports and policy documents indicates a commitment to developing a range of CPD initiatives for teachers to meet the needs of pupils with special educational needs. These initiatives include post-graduate programmes, shorter programmes and on-line learning. Research by Stevens (2007) related to pupils with mild general learning disabilities identifies the need for postgraduate training to be extended to a greater number of teachers and modular and distance-learning options explored to meet the needs of teachers in isolated locations.

The Department of Education established a one year full-time postgraduate programme for teachers working with pupils with special educational needs in St. Patrick's College, Drumcondra, Dublin in 1964 (DES, 2006c). Post-graduate professional development programmes have continued to develop and are now

provided in six institutions (DES, 2009d). The rationale for the expansion of third-level CPD programmes is based on a concern to develop teachers' expertise in meeting the needs of pupils with special educational needs to a high level (DES, 2006c). However teacher absences from school to attend post-graduate programmes are being reduced and the post-graduate programme has moved from being delivered on a one-year full-time release basis to a fifteen-week release and now to an eight-week release programme. This trend is likely to continue in view of the findings and recommendations of McCarthy et al. (2009) who reported that in 2008, over 100,000 teaching days were devoted to in-service teacher CPD and 3,300 instances of full school closures were recorded in primary schools for whole-staff training. The authors pointed out that the OECD's average total statutory working time for teachers is more than double the average teaching time of teachers in Irish primary or second-level schools. The report recommends that any revised contract for teachers should incorporate activities such as school planning, parent-teacher meetings, in-service training and development, supervision of pupils and middle-management duties.

Four e-learning courses were provided on a pilot basis by the DES in July and August 2003 to assist teachers in the areas of ASDs, dyslexia, attention deficit hyperactivity disorder (ADHD) and inclusion (DES, 2006c). These courses continue to be available and are based on a model of self-paced study over approximately twenty hours duration. The modules comprise online course material, assigned online readings, discussion boards related to course modules and an online quizzes based on course objectives. Participants are supported by online tutors who are experienced practitioners in psychology and education. These courses have now expanded into other areas of special education. The DES provided support for a blended Certificate/Diploma in Education (Special/Inclusive) programme, which was jointly developed by St. Patrick's College, Drumcondra, Dublin and the Institute of Child Education and Psychology Europe (DES, 2007b; 2008a). The aim of the course was to develop teachers' knowledge, skills and competencies in meeting the needs of pupils with special educational needs through enabling mainstream primary and post-primary teachers to access CPD in a structured, intensive and sustained manner, while simultaneously allowing for the practical application of the programme content (Hanafin, 2007).

Support had also been provided by the DES for a wide range of shorter courses through the network of Education Centres, teachers' unions, external organisations and through the programme of Summer courses for primary teachers (DES, 2006c). The DES identified particular difficulties in relation to the un-coordinated and ad-hoc nature of the delivery of these courses and established the SESS in September 2003 to address this deficit (DES, 2006c). The SESS is a CPD support service for teachers, which functions under the aegis of a DES steering committee. The SESS aims to enhance, consolidate, co-ordinate, develop and deliver a range of professional development initiatives and support structures for school personnel working with pupils with special educational needs (SESS, 2005). The mission statement of the SESS articulates a commitment to adopting a flexible and person-centred approach to enhancing teachers' knowledge and skills and maintaining a focus on the development of theoretical and practical pedagogical perspectives (Crowley O'Sullivan, 2009). The SESS support scheme allows schools to identify their particular professional development needs and apply for advisory or financial support to the SESS. Central to the work of the SESS is the development of associate expert teams of experienced teachers, who on secondment from the classroom provide advice and support for schools. One of these teams is available to assist teachers of pupils with ASDs. These teams are supported by design teams, comprising staff members of Colleges of Education and Universities, representatives of the DES and members of the SESS. The SESS also co-ordinates projects in relation to particular aspects of the education system in order to share and promote best practice, improve and establish unity of standards and working approaches and raise the social and educational achievements of pupils with special educational needs (SESS, 2005). The key emphasis of the SESS is on encouraging school-led CPD, which has been identified as an important component in developing a CPD model for schools, and is also linked to the aims of CPD related to school improvement priorities and individual teacher growth (Logan and Sachs, 1991; Fullan, 1995). Research has shown that teachers value support and advice from peripatetic advisory services that provide a school-based service related to individual schools' identified needs (Chazan, 1994). Following a case study of school-led professional development, Day (1999) cautions that models of school-based professional development are dependant on factors that include contextual constraints, the development of self-reflection and

collaboration, the various levels of commitment of individual staff members, the roles played by school leaders and the modes of dissemination. It is suggested that the tensions, which emerge between individual and institutional need, can begin to be addressed through providing a continuum of CPD opportunities that seek to maintain a balance between meeting both needs.

### **Continuing Professional Development for Teachers of Pupils with Autistic Spectrum Disorders**

The Report of the Task Force on Autism observed that the education and training of teachers, other professionals and support staff was fundamental to the success of proposals on the reform of the education of children and adults with ASDs (DES, 2001). Fifty-two contributors to the report referred generally to the lack of comprehensive ASD-specific training for teachers, classroom assistants and others. The National Research Council in the US (2001a) reports that personnel preparation remains one of the weakest elements in the provision of effective programmes for children with ASDs and their families. The SIGN National Clinical Guideline (2007) suggests that the gaps in training for professionals working with individuals with ASDs results in a lack of knowledge, skills and expertise in both general and specialist professional groups. The wide variability in ASDs in relation to social interaction, language and communication, learning, sensory and behaviour deficits in combination with the wide range of ability, developmental levels, isolated skills and unique personalities presents particular challenges for teacher preparation (Wienke et al., 2005). In the US as the trend towards mandatory legislation in special education evolved, Autism Programme Quality Indicators developed by the New York State Education Department identify personnel preparation among the quality indicators of provision for pupils with ASDs (Crimmins et al., 2001). Crimmins et al. advise that staff should be knowledgeable and skilled in relation to the characteristics of ASDs, assessment methods, developing IEPs, curriculum, environmental adaptations and accommodations, instructional methods, strategies to improve communication and social interaction skills and classroom and individual behaviour management techniques. Research indicates that there is a need for a system of structured CPD for teachers of pupils with ASDs that allows for both practitioner reflection and

development of practice (Jordan and Jones, 1996; DES, 2001; McKay and Dunlop, 2004; DES, 2006b).

A large number of teacher appointments was made specifically for pupils with ASDs, following the announcement by the then Minister for Education and Science, Minister Mícheál Martin on Thursday the fifth of November 1998, of the concept of automatic entitlement, which pledged to provide support for all pupils with special educational needs, (DES, 1998; 2006c). At that time, responsibility for providing for the CPD of teachers was managed by the ICDU of the DES (Egan, 2004). The ICDU provided a series of ASD-specific CPD programmes in a variety of locations from 2000 (TES, DES, 2004). These programmes ranged from one to five day seminars and were delivered by international experts and experienced practitioners who were seconded from their posts in schools to deliver the CPD. The programmes of CPD included generic introductory components related to the triad of impairments, sensory issues, behaviour and classroom management, information technology and resources, assessment and individualised planning, and specific programmes that included TEACCH, PECS, ABA, social stories and floortime (TES, DES, 2004). Responsibility for the co-ordination, planning and delivery of these CPD programmes was transferred to the SESS when it was established in 2003. As part of a developing strategy to enable teachers to meet the learning and teaching needs of children with ASDs, the DES engaged in discussions with St. Patrick's College, Drumcondra, Dublin to facilitate the delivery of a distance learning course in ASDs that had been developed by Birmingham University (DES, 2006c). In September 2000, two staff members from the Special Education Department, St. Patrick's College, studied at Birmingham University to develop expertise in ASDs in order to provide support as tutors to post-graduate students who would subsequently participate in the programme in Ireland. A one-year part-time, distance learning course commenced in January 2001. The structure of the part-time programme involved distance learning and small group tutorials, together with two residential weekends of study. The aims of the programme were to provide teachers with a knowledge of ASDs, based on theory, research and practice, to assist in developing an understanding of the implications of ASDs for pupils' learning and teaching and to improve teachers' awareness of the different approaches to meeting pupils' needs (University of

Birmingham, 2001). Over a three-year period, a total of seventy-five teachers, received this training, leading to the award of a Post-Graduate Certificate in Autism (Children) from the University of Birmingham (DES, 2006c).

From 2004, St. Patrick's College, has independently delivered a Graduate Certificate in the Education of Pupils with ASDs, which is accredited by Dublin City University (DES, 2006c). The model of delivery of this one year part-time programme is one of distance learning, together with small group tutorials and includes assessed and supervised teaching practice. Participants are released from their schools for two weeks over the academic year (DES). The philosophy of the certificate programme is encapsulated in its stated overall aim of developing the knowledge, skills and expertise of teachers in order to enhance the provision of appropriate education for children and young people with ASDs (Special Education Department, St. Patrick's College, 2004). The learning outcomes of the programme are concerned with enabling participants to describe and assess the educational strengths and needs of pupils and to plan appropriate educational programmes in collaboration with pupils, parents, SNAs and other relevant professionals. Participants are required to demonstrate the acquired knowledge and skills through teaching practice and classroom management, to recognise, utilise and evaluate the common teaching strategies appropriate for pupils with ASDs and to demonstrate a theoretical and practical understanding of ASDs and related disabilities. A multi-modal approach to assessment is adopted and participants engage in written assignments, teaching practice and action research. A strength of the structure of this programme is identified as the emphasis on the direct application of theory and research-based knowledge to the classroom context, thereby allowing participants to relate their learning to the pupils' learning and teaching (Special Education Department, St. Patrick's College). Assignments are related to the participants' school contexts and participants' teaching is supervised and assessed. A Post-Graduate Certificate/Diploma in Special Educational Needs (ASDs) was developed by St. Angela's College, Sligo and the SESS in 2008 (SESS and St. Angela's College, Sligo, 2009). The programme aims to provide teachers with a repertoire of evidence-based skills that enables them to effect a child-centred approach to meeting the needs of pupils with ASDs. In order to provide teachers with flexibility in accessing CPD,

the Certificate/Diploma can be completed over a two-year period and is open to all teachers of pupils with ASDs. Twenty-five places are available annually on the programme, which comprises four modules related to developing a theoretical understanding of ASDs, focusing on assessment, planning and curriculum access, enabling teachers to implement teaching approaches appropriate to pupils with ASDs and addressing pupils' self-management and behaviour. The programme is delivered through on-line learning and face-to-face sessions and requires from twenty-three days release from school for the Certificate and forty-four days release from school for the Diploma over a two-year period (DES, 2009b). Assessment is through written assignments, portfolios and a supervised practicum (SESS and St. Angela's College, Sligo, 2009).

### **Conclusion**

The literature reviewed suggests that engaging in evaluations of existing programmes of CPD assists in refining our insights and understanding and contributes to the identification of optimal CPD models, which should be encouraged by policy makers in the future. Previous chapters have identified the criticality of CPD for teachers of pupils with ASDs. It is essential that CPD programmes for teachers of pupils with ASDs are evaluated to ensure they are achieving optimal outcomes for schools, teachers and ultimately for pupils. Evaluation is particularly important in a climate characterised by competing demands on Central Government for budgetary allocations in order that the provision of significant fiscal resources to CPD programmes can be justified. I concur with Ashdown (2001) that teachers as individuals have the primary responsibility for implementing change in learning and teaching processes within the school as an organisational structure. Individual and organisational processes are therefore required to support change. The ethos and locus of the school is significant to professional development as it has the potential to provide opportunities for peer coaching, critical friends, appraisal, support, advice and collaborative practice (Spindler and Biott, 2000; Poulson and Avramidis, 2003; Hodkinson, 2006). This research is concerned with evaluating the effects of the ASD-specific post-graduate certificate programme, delivered at St. Patrick's College, Drumcondra, Dublin from 2001 to 2004, on practice in six schools and establishing whether a cascade effect on school practice can be established. While the research

was not specifically restricted to this timeframe, the participants who volunteered for the research had completed the programme during this period. The methodology developed for the study will be informed by the evaluative theoretical framework summarised at Figure 5 above.



## **CHAPTER SEVEN**

### **METHODOLOGY**

#### **Introduction**

The evaluation of the effectiveness of CPD has been criticised as adopting a restrictive and limited focus (Muijs et al., 2004). Evaluations have predominantly involved a summary of programmes attended and participant-satisfaction feedback, to the neglect of ascertaining the impact of CPD on teachers' subsequent practice (Guskey, 2000; Burchell et al., 2002; Muijs et al.). I propose to adopt specific methodological measures designed to avoid these criticisms through constructing a broad evaluative framework based on the research questions identified in Chapter One.

#### **Defining Evaluation**

Evaluation research is described as a type of applied research that is designed to answer practical, real-world problems concerning the effects of some policy or programme (Kidder et al., 1986). Evaluation is concerned with the process of collecting and analysing information with the purpose of reaching conclusions on specific questions (Department of Finance, 2007). Programme evaluation is currently a major site of qualitative research and provides opportunities for qualitative researchers to contribute to and influence social policy (Denzin and Lincoln, 2005). Target populations can be isolated and the effects of programmes on such groups ascertained through the evaluator becoming the conduit for enabling the voices of the groups to be heard.

The concept of causation in qualitative evaluation differs from the regularity theory of causation whereby one event is deemed to cause another event when it takes place regularly before the other (House, 2005). House observes that social causation is more complex than regularity theory suggests and all of the variables that might influence outcomes cannot be controlled for. Causation in qualitative evaluation addresses the complexity of social causation through acknowledging the limitations of the regularity theory and providing comprehensive descriptions of the interactions of people and events. Pawson and Tilley (1997) advise that the evaluator needs to

understand the conditions required for the programmes' causal potential to be released and be in a position to identify whether in fact this has been released in practice. The authors consider that evaluators should penetrate beneath the surface of social realities, understand the choices and capacities, which determine social behaviour, consider the impact of contexts, analyse programme outcomes and the manner in which they are produced, identify generalisation possibilities, engage in a teacher-learner relationship with programme policy makers, practitioners and participants and acknowledge that programmes are implemented in a changing and permeable social world. Qualitative evaluation therefore provides an appropriate mechanism for evaluating the effectiveness of an ASD-specific CPD programme on practice in schools. Such evaluation will require a research model that adopts an expansive and pragmatic approach.

### **A Research Model for Evaluating Discrete Elements of Continuing Professional Development**

Muijs et al. (2004) advise that an antecedent level should form part of an evaluation of CPD. The authors suggest that policy backgrounds and other factors affecting the choice and development of the programme in addition to the participants' motivation behind and reasons for choosing the particular programme should be explored. The literature review has detailed the policy backgrounds and development of the programme. Participants' motivation and reasons for choice of programme will be explored during the research. The evaluation model constructed by Guskey (2000) to assess the potential impact of CPD at five levels is illustrated at Figure 6 below.

At Level One, questions address the appropriateness of content, process and context in meeting participants' needs. I will reduce this level to appropriateness of content and process. The context in which CPD related to ASDs has developed is analogous with the antecedent level suggested by Muijs et al. (2004). Level Two will consider the cognitive, affective and behavioural learning of participants. Organisational support and change will be evaluated at Level Three. Participants' use of new knowledge and skills will be examined at Level Four. Guskey identifies Level Five as the most important in gauging the impact of CPD on pupils' learning, which encompasses cognitive and non-cognitive outcomes. Due to the difficulties inherent

in assessing both cognitive and non-cognitive outcomes of pupils with ASDs within the timeframe of this research, I will establish pupils' on-task behaviour from the video data and explore the factors that appear to be contributing to this.

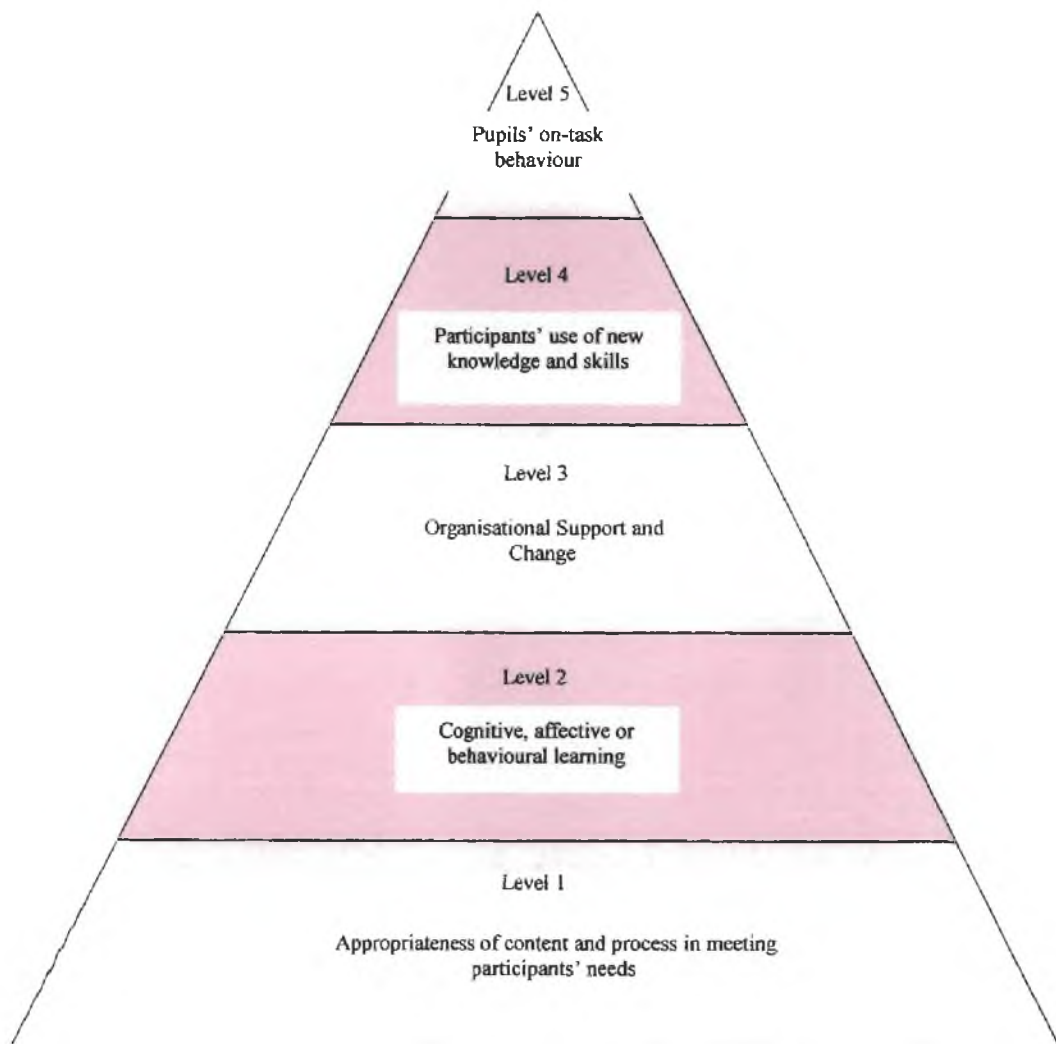


Figure 6. A Research Model for Evaluating Discrete Elements of Continuing Professional Development

As I propose to record a lesson chosen by each teacher for a minimum of twenty minutes and a maximum of forty minutes duration, the analysis of data related to Level Five will thus be limited both by the teachers' choice of lesson and the time-frame involved. The evaluation model devised by Guskey is sufficiently flexible to incorporate the framework for evaluating the aims, functions and areas of impact of

CPD as suggested by Logan and Sachs (1991), Day (1999), Powell et al. (2003) and Grundy and Robison (2005), which was detailed previously in Figure 5.

### **A Rationale for the Selection of the Research Methodology**

One of the most contentious debates in educational research focuses on whether the researcher should use quantitative or qualitative methodologies (Scott, 2000; Porter and Lacey, 2005). Scott observes that quantitative research in education is based on an assumption that the act of quantification constitutes a neutral, descriptive representation of reality, that relationships between variables allow for prediction and that causal relationships consist of the constant conjunction of observable events. Quantitative research is influenced by the epistemology of positivism, which assumes that knowledge is cumulative, convergent and objective (Lincoln and Guba, 1985; Skrtic, 1991). Scott describes such assumptions as naïve and asserts that all realism is necessarily representational since interpretation permeates research at all stages. In making choices related to strategy, method, data analysis and presentation of findings, the researcher is involved in constructing an account of the world. Oakley (2004) observes that there are different views as to what constitutes evidence and argues that good quality evidence is assembled by researchers who are committed to both ethics and science. Qualitative methodologies rely on nonnumeric data in the form of words and qualitative inquiry is viewed as a matter of perception of qualities and an appraisal of their value (Schwandt, 1997). Brantlinger et al. (2005) adopt an inclusive definition that describes qualitative research as a systematic approach to understanding qualities, or the essential nature of a phenomenon within a particular context.

Schindele (1985) identifies a series of methodological problems, which impact negatively on the use of quantitative research methods in special education. These difficulties include establishing adequate subject groups, the representativeness of the research population, generalising findings, threats to internal validity from intervening variables, regression effects or variable-interaction, availability of adequate measurement instruments and the lack of individual and process-oriented data. Schindele advises that these deficits should be addressed and contends that too much research in the field is unreliable, lacking in significance and of little relevance

to special education practice. However Schindele's observations were applicable during a period when research methods and the understanding of special education were less well developed. It is nevertheless useful to consider the methodological problems he articulates when undertaking or evaluating research in special education. Conversely concerns have also been expressed regarding the emergence of a distrust of empirical research in special education, which it is asserted leads to an antiquated and mechanistic approach to knowledge that is inconsistent with the current understanding of learning and teaching (Heward, 2003). Sasso (2001) refers to the emergence of a romantic animosity towards objectivity and knowledge that is negatively impacting on research in special education.

Woods (1992) argues that an unproductive dichotomy has evolved between quantitative and qualitative research methods and suggests that the epistemological contrast between the two is overstated. Oakley (2004) advises that the only important prerequisites in selecting a research methodology are that the method of collecting evidence should match the question, and that methods, questions and findings should all be part of a process that is conducted openly and systematically and with a commitment to democratic enlargement of the universe of what is known. Merriam (1998) also suggests that the personality, skills and attributes of the researcher should be commensurate with the type of research being undertaken. Utilising multiple methods and informants to determine what relationships exist among variables and whether such relationships provide the basis for a meaningful and valid construct provides an alternative approach (Borthwick-Duffy, 1992). Research in special education has been criticised for failing to adequately categorise research designs, which results in an inability to make comprehensive inferences from the research findings (Hogg et al., 2001). The choice of research design should emerge from the research question and be concerned with utilising methodologies and approaches that are concerned with improving the quality of life for those with whom the research is concerned. There is however an onus on the non-disabled researcher to avoid adopting an attitude of addressing wrongdoing in favour of presenting accessible structured accounts, disseminating research findings, facilitating discussion and promoting equality in research relations (Porter et al., 2006).

I agree with Porter and Lacey (2005) and eschew a purist approach to research methodology in favour of adopting a pluralist paradigm, capable of capturing the intricacies of special education, and elucidating a process rather than verifying an a-priori hypothesis. Figure 7 provides a summary of the research methodology that will be used in the research.

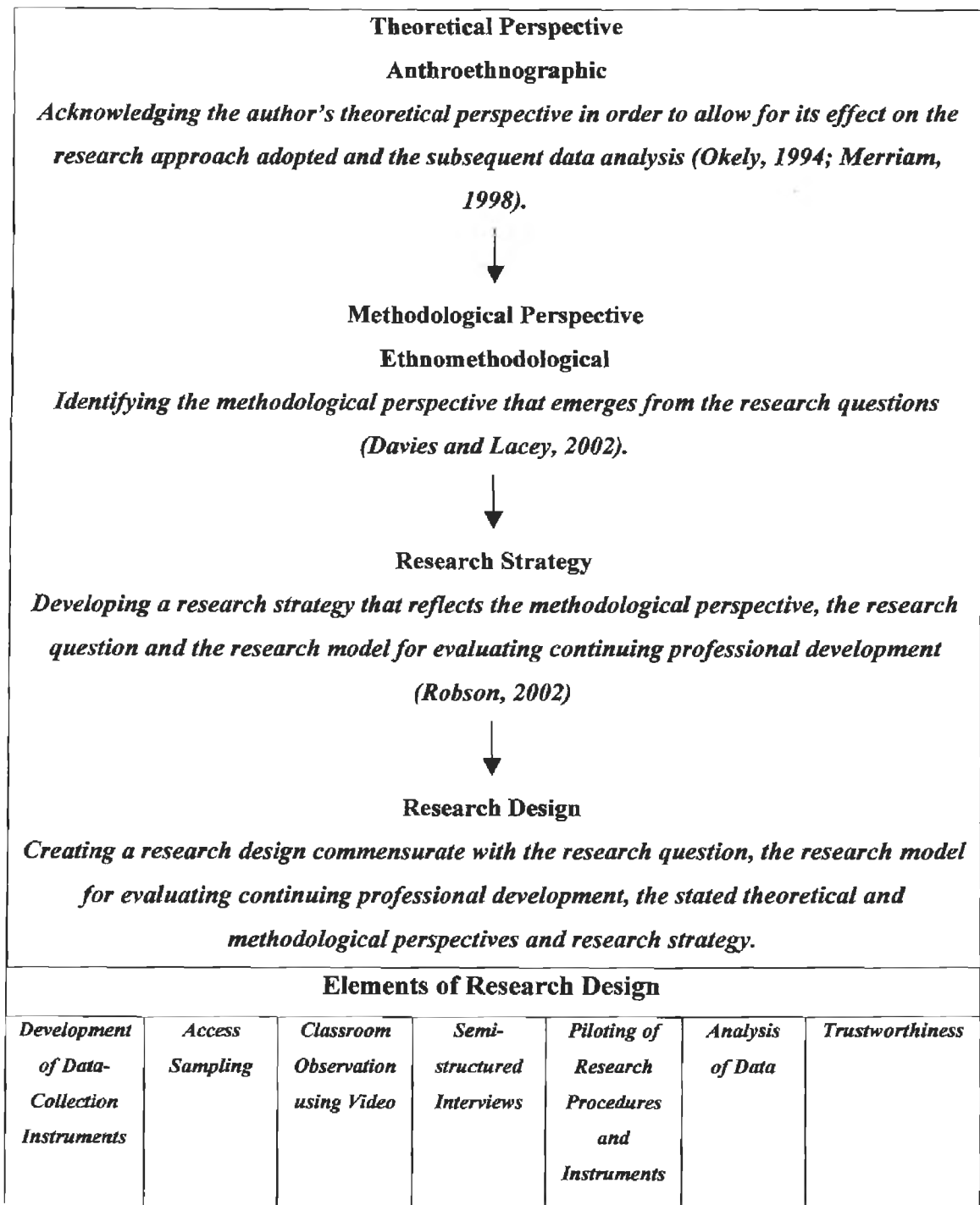


Figure 7. Research Methodology

Yin (2003) advises that case studies are the preferred strategy when answering how or why questions, when the researcher has little control over events and when the focus is on a contemporary phenomenon within a real-life context. I will adopt a research design that is based on a case study approach, linked to the identification of the theoretical and methodological perspective of the researcher, sensitive to the research questions and capable of accommodating the research model for evaluating CPD at Figures 5 and 6 above (Glaser and Strauss, 1968; Lincoln and Guba, 1985; Miles and Huberman, 1994; Merriam, 1998; Strauss and Corbin, 1998; Yin).

### **Theoretical Perspective**

A researcher's theoretical perspective affects both the research approach adopted and the subsequent data analysis as all observations are socially situated in the worlds of, and between the observer and the observed and filtered through the lenses of language, gender, social class, race, and ethnicity, (Miles and Huberman, 1994; Okely 1994; Scott, 2000; Denzin and Lincoln, 2005). I espouse a theoretical perspective that conceives human social behaviour and social phenomena as a combination of multiple truths and understandings rather than as static and mechanical occurrences (Garfinkel, 1967; Bhaskar, 1975). Based on this theoretical perspective, I propose to adopt an inductive anthroethnographic approach linked to anthropological and ethnographic perspectives, characterised by the absence of hypothesis and informed by the theories, themes and concepts that have emerged from the literature review (Glaser and Strauss, 1968; Spindler, 1982; Silverman, 2000). An anthropological perspective considers that the process of observing people and social relationships is related to the concept that human behaviour is shaped in the context of a sociocultural milieu and that every human event is culture-bound (Spindler, 1982; Shimahara, 1988; Peberdy, 1993). An ethnographic perspective is concerned with uncovering the variety of beliefs, values, perspectives and motivations of a group of people in particular contexts in order to provide an emic record of the process (Le Compte et al., 1993; Woods, 1996; Delamont et al., 2000). Spindler defines emic as presenting the view from within the culture being researched through displaying a commitment to portraying research participants' views in heuristic, natural forms. This theoretical perspective will inform the methodological perspective that has emerged from the research questions.

## **Methodological Perspective**

Davies and Lacey (2002) advise that the methodological perspective adopted by the researcher should emerge from the research questions. I concur with Burack et al. (2004) that a reconceptualisation of research in ASDs should be guided by the research questions and promote more conservative and precise interpretations of empirical findings. The research questions are concerned with evaluating the effects of a post-graduate ASD-specific CPD programme on practice in six schools through considering the impact on teachers' practice and on whole-school processes. I hope to also establish whether particular valued outcomes associated exclusively with participating in this programme are identifiable through evaluating the practice of four teachers who have not completed the programme. Specific research questions based on a combination of theoretical perspectives related to the functions, aims and areas of impact of CPD have emerged from the literature review. Grundy and Robison (2004) suggest that CPD should serve the three principal functions of extension, renewal and growth. According to Day (1999), CPD may effect accelerative or transformative growth. The aims of CPD are identified by Logan and Sachs (1991) as advancing the competitive purposes of social and economic policy, school improvement priorities and individual growth. A typology of CPD outcomes as they impact on teachers' motivation and attitude, knowledge, skills and practice is identified by Powell et al., 2003. The research questions will therefore seek to ascertain whether the ASD-specific CPD programme has fulfilled the functions of CPD as they apply to the aims and areas of impact of CPD as detailed in Figure 5 previously. However while research questions have emerged from this evaluative framework, it does not preclude the emergence of additional themes and findings in the data. I propose therefore to adopt a qualitative methodological perspective in order to address the research questions and facilitate responsive outcomes for teachers and pupils (Schindele, 1985; Peck and Furman, 1992). This perspective does not preclude the use of quantification, which will be used to contribute further to empiricism and knowledge production (Best and Kahn, 1993; Brantlinger et al., 2005; Porter and Lacey, 2005). I suggest that adopting a qualitative focus in ASD-research may be particularly beneficial in view of the nature of the impairments of ASDs, which are described as "qualitative impairments" in the relevant classification



systems (World Health Organisation, 1994; American Psychiatric Association, 2000).

I will adopt an ethnomethodological paradigm, which uses a variety of interpretive methods (Garfinkel, 1967). The methodological perspective adopted for the research incorporates the ten themes suggested by Patton (1990), which will permeate and inform the research process. Table 5 provides a summary of these themes.

**Table 5. Ten Themes of Qualitative Research**

<b>Themes</b>	
<b>Naturalistic Enquiry</b>	A process of studying naturally unfolding real-world actions in a manner not contrived, manipulated or controlled by the researcher.
<b>Inductive Analysis</b>	Immersion in the data leading to an analysis grounded in the data through the discovery of categories, dimensions and interrelationships.
<b>Holistic Perspective</b>	Acknowledging the complexity of the phenomena being researched as a multifaceted system, which is greater than the sum of its component parts
<b>Qualitative Data</b>	Detailed and descriptive data.
<b>Personal Contact and Insight</b>	The researcher's personal experiences and theoretical insight are acknowledged and the researcher has direct contact with the people, situation and phenomenon being researched.
<b>Dynamic Systems</b>	Attention is directed towards process and the assumption that change is intrinsic to the process.
<b>Unique Case Orientation</b>	Fidelity to respecting and capturing the details of individual cases prior to cross-case analysis.
<b>Context Sensitivity</b>	Findings are contextualised in social, historical and temporal contexts.
<b>Empathic Neutrality</b>	The role of the researcher is conceived as understanding the complexities of the real-world situations while advancing empathic insight and personal experience as part of the relevant data.
<b>Design Flexibility</b>	The researcher exhibits a willingness to pursue new paths of discovery as understanding deepens and/or situations change.

Within this ethnomethodological perspective, I will adopt a commitment to engaging in emancipatory research as a means of empowering the research participants and articulating their experiences (Southgate, 1981; Lather, 1986; Oliver 1992). I will

continue to be concerned that the research participants should be involved in a democratised process of inquiry, characterised by negotiation, reciprocity and empowerment. I will engage in a critical reflection on human rights, characterised by a commitment to maintaining integrity and credibility in relation to methodological rigour and political expediency as a basis for this approach (Moore et al., 1995).

### **Research Strategy**

I will employ a case study research strategy comprising an empirical investigation of a particular contemporary phenomenon using multiple sources of evidence in order to address the research question (Huberman and Miles, 1998; Hill and Kerber, 2000; Stake, 2000; Robson, 2002). Cohen et al. (2000) identify one of the strengths of case studies as the observation of effects in real contexts and thereby acknowledge context as a powerful determinant of cause and effect. I will remain cognisant of the difficulties in capturing the complexity of learning and teaching through educational research and will employ the case study in order to retain the holistic, processual, personal and social character of learning and teaching (Gomm and Woods, 1993; Hammersley, 1999; Troman et al., 2006). Case studies have been described in terms of their outcomes as exploratory, descriptive or explanatory (Merriam, 1988; Yin). I concur with Yin that categorisations are not mutually exclusive and suggest that case study research can simultaneously be used to generate hypotheses, develop conceptual categories inductively, and provide explanations and evaluations.

Yin (2003) advises that the analytic benefits and external generalisability from multiple case studies are considerably greater than those of single case studies. I will therefore adopt a comparative multiple-case study design through proposing to engage in research with six teachers who have completed an ASD-specific post-graduate programme of CPD and four teachers who have not completed this programme.

### **Research Design**

I will be particularly concerned to implement a research design that is commensurate with the research question, the research model for evaluating CPD, the stated theoretical and methodological perspectives and research strategy. A particular emphasis will be placed on the potential of the research design to analyse and

evaluate the complexity of the effects of CPD and the critical importance of the practical application of the research findings (Schindele, 1985; Woods, 1996; Paechter, 2003). In designing the research, I will remain conscious of the potential of the research findings to contribute to policy development in the provision of CPD for teachers of pupils with ASDs (Kidder et al., 1986).

### *Development of Data-Collection Instruments*

Brantlinger et al. (2005) suggest that because research settings and participants are dynamic and diverse, data collection is most productively done in creative and flexible ways. Data-collection instruments will be developed with reference to their ability to yield data relevant to the aims of the research (Cohen et al., 2000). The findings of the literature review will inform the content of the data-collection instruments. The human, physical, material, administrative, organisational and temporal factors involved in conducting the research will also be considered. An effort will be made to contextualise the language of the research instruments with reference to the cultural and linguistic milieu of schools and the experience of the interviewees (Burgess, 1984; Feldt and Brennan, 1993). In order to contribute to the reliability and validity of the research and effect methodological triangulation a number of data-collection instruments will be devised (Webb et al., 1966; Silverman, 2000). Video-observation schedules and semi-structured interview schedules for individual class teachers, school principals and focus-groups will be developed. Schedules for recording the management of critical events and for the time-sampling of pupils' on-task behaviour during video-analysis will also be devised. Specific templates will be used to record the teaching qualifications, academic qualifications and teaching experience of all interviewees. Details of pupils' age, gender, diagnosis, additional special educational needs and assessed level of intellectual ability will be recorded on specifically-designed profiles. Copies of all data-collection instruments are included in Appendix D.

## Access and Sampling

### *Access to the Research Setting: Implications for the Researcher and Inspector Role*

Troman (2006) observes that a necessary first step for those engaging in ethnographic fieldwork involves gaining access to the setting, which has been chosen for the study. Troman identifies a series of macro-contextualisations that interfered with him gaining access to schools to investigate the impact of education reform in the English education system in the period 1992-1996. Following discussions with eleven schools where Troman was refused entry, he included the intensification of teachers' work, fear of surveillance by teachers from external experts, teachers' negative perceptions of educational researchers, the presence of other researchers, student teachers on practicum in schools, onerous duties on headteachers and the particular demands of the temporal cycle of the school year as factors considered by schools in refusing access. Similar macro-factors are identifiable for the researcher in the Irish education system. Additionally teachers will be aware that I work as an inspector with the DES. I envisage that this will have particular implications based on the functions of the Inspectorate in the Irish context. The functions of the Inspectorate are detailed in S. 13 of the Education Act, 1998 (Ireland, 1998). These functions include providing support and advice to schools, evaluating the organisation and operation of schools and the quality and effectiveness of the education provided, including the quality of teaching and the effectiveness of individual teachers, assessing the implementation of regulations made by the Minister and reporting to the Minister, board of management, patron, parents and teachers as appropriate. In negotiating access to the research settings, I will therefore remain sensitive to political, ideological, policy and seasonal contexts identified by Troman for all researchers. I will be particularly sensitive to my role as an inspector and seek to distance my research role from that of the inspectorate through adopting specific strategies both at the access stage and throughout the research process. These strategies will continue to be articulated throughout the thesis in order to allow the reader to gauge any potential impact they may have on the research process and findings.

I will conceive the circumstances of access as a process that while negotiated at the initial stage of the research process will continue to change as the research progresses (Delamont, 1992). Delamont (1992) observes that some organisations have very powerful gatekeepers who control entry to the research setting. Bogdan and Taylor (1975) comment that the researcher usually gains access to an organisation through the person in charge. While I will remain cognisant of this advice, I will also acknowledge the possible existence of a number of gatekeepers in school settings who may grant or withhold permission for the researcher to study different facets of the research context (Burgess, 1984). Accordingly access will be conceived in terms of multiple points of entry that will require a continuous process of negotiation and re-negotiation throughout the research. I will consider the negotiation of access as a critical element of the research design and will carefully document all access negotiations in my reflexive journal (Delamont, 1992).

Negotiating access will not be equated with physical access to schools but rather will be seen as a process of proceeding across several thresholds that mark the way to the heart of the culture (Woods, 1996). Ball (1993) points out that the conduct of ethnographic fieldwork relies fundamentally on researchers' social relations skills and their ability to make themselves acceptable to all parties in the field. I will remain conscious of my former role as a teacher, my professional role as an inspector, and my present role as a researcher and the potential for these roles to impact on the multi-layered access required for the research. I will seek to demonstrate honesty, respect, courtesy, sincerity and deference in all of my interactions and remain vigilant to any negative impact my presence might have in the research setting. I will disassociate the research from the work of the Inspectorate through explicitly stating that while the DES has paid my fees as part of my professional development, I will be conducting the research in my own time. I will also reassure research participants that the data obtained will be used for the research purpose only and will not be used for DES purposes.

### ***Sampling, Selection and Profile of Research Participants***

Sampling choices are powerfully determinative of which data will be considered and used in analysis and therefore will be carefully described (Schwandt, 1997;

Huberman and Miles, 1998). I concur with Lieberson (2000) in acknowledging that appropriately rigorous procedures should be used in choosing research participants when the number of cases being researched is small. The ten individual participants will be teachers in classes for pupils with ASDs. The participants in the focus group interviews will be teachers of other classes in the respective ten schools. The principals in the ten schools will also be invited to participate in the research. The use of multiple-case studies will not be based on a sampling logic, which requires an operational enumeration of all potential respondents and the application of a statistical formula for selecting a specific subset of respondents (Yin, 2003). Stake (2005) observes that case studies regularly begin with cases that have already been identified. In this research, I am interested in assessing the effects of a particular post-graduate programme on the approaches to learning and teaching adopted by teachers and thus the cases that are to be the subject of the research will be readily identifiable from the outset. I will therefore employ purposive sampling in selecting ten holistic single-case studies (Stake). In selecting both the six case studies of teachers who have completed the post-graduate programme, and the four teachers who have not completed the programme, I will ensure that there is a representative sample of pupils with a range of general learning disabilities and ASDs. From 2004, teachers who participated in the post-graduate programme completed supervised and assessed teaching practice. I will ensure that at least one third of the sample of teachers selected have completed the programme since 2004 in order to explore issues related to this element of the programme. I will be less concerned with whether the case studies are representative of the continuum of provision in special and mainstream schools as my focus is on identifying the effects of the post-graduate programme on practice in schools rather than on a specific type of school. I will choose cases that offer potential for expanding learning in the belief that this is a different and sometimes superior criterion to representativeness. The decision to include six schools where teachers will have completed the post-graduate programme and four schools where teachers will not have completed the programme is based on expediency and the time-frame for the research rather than a particular sampling logic.

In order to mitigate the potential influence of my role as an inspector with the DES on the sampling and selection process, I arranged that the Special Education Department would initiate the process. This will create a distance between the participants and myself at the initial stage and mitigate any potential influence my role as an inspector might have on their decision to participate or not participate. The process of selecting the ten participants will be initiated on the thirty-first of May 2006 by the Special Education Department of St. Patrick's College. The Special Education Department will write to all teachers who have participated in the ASD-specific post-graduate programme in the college and invite them to participate in an evaluation of the programme being conducted by the college. Teachers will also be informed that a further research project related to teacher education and ASD will be conducted by Emer Ring in the 2006-2007 school year. No reference will be made in this correspondence to my role as an inspector with DES. Subsequently on the eight of November 2006, all teachers who have completed the post-graduate certificate in ASDs will be asked to indicate their interest in participating in this research project and to give permission for their details to be released to me. The final date for receipt of responses as agreed with my supervisors will be the twenty-fourth of November 2006. On the third of January 2007, I will forward a holding letter to all respondents who indicate an interest in participating in the research project. I will also send a letter of acknowledgement and thanks to any other respondent who replies to my letter but who may not be in a position to participate in the research due to personal circumstances or other commitments. The aim of the holding letter will be to acknowledge and thank respondents and inform them of the necessity of selecting a total of ten research participants due to the time-frame of the research. Respondents will also be informed that I will be in contact with them shortly and that the selection of participants will be based on the geographical proximity to both my home address and possible work locations from January 2007 to June 2007. Should any respondent be working in a school in an Irish speaking area or in Irish-medium school, all correspondence will be written in Irish. See Appendix E for copies of all correspondence with research participants.

I will purposefully select four teachers who have not completed the ASD-specific post-graduate programme and who are currently teaching in dedicated ASD-

provision. I will identify these teachers from my knowledge of geographically adjacent schools and in consultation with an inspector colleague with similar experience. I will assure the teachers selected that they are under no obligation to participate in the research and that the research is my own work and is not related to the role of the Inspectorate. I will contact the ten selected research participants by phone and inform them in relation to the aims, purposes and processes of the research. I will pay particular attention to the issues of consent, employing over research processes and voluntariness in all communications with research participants and consistently differentiate my role as a researcher from that of an inspector (Burgess, 1984; Sieber, 1992; Woods, 1996; Moore et al., 1995, Robson, 2002). I will forward a letter of thanks to the research respondents who indicate an interest in participating in the research. See Appendix E for a copy of this letter.

Following the agreement of the ten research participants to participating in the research, I will contact the principal teacher in each of the ten schools by phone and explain the aims, purposes and process of the research. I will refer specifically to the focus-group interviews and ask that the principal invites teachers in the school to participate in this process, which I will explain to the focus group participants during my visit to the school. I will inform the principal teachers that I will circulate a letter of explanation to parents in order to obtain parents' permission for their children to be involved in the project. On receipt of initial facilitative affirmative responses from participants and gatekeepers, I will write a formal letter to the Board of Management of each school outlining in broad terms the aims and purpose of the research. See Appendix E for copies of these letters.

Generalisability is a standard aim in quantitative research achieved by statistical sampling procedures, which allows the researcher to be confident in relation to the representativeness of the sample and the inferences that can be made (Silvermann, 2000). Guralnick (1978) observes that a failure to engage in statistical sampling procedures is not a primary factor in evaluating the value of research in special education. Schindele (1985) identifies the characteristics of the research population, the environment in which the research is conducted, the nature of the special education process, measurement and data collection and ethical and moral



considerations as aspects to be considered in engaging in research in special education. Purposive sampling allows the researcher to choose a case because it illustrates the key features of the process in which the researcher is interested in (Silvermann).

### *Classroom Observation Using Video*

Wragg (1999) observes that good classroom observation can lie at the heart of both understanding professional practice and improving its quality, hence my decision to use it as a research method. Kidder et al. (1986) describe observation as a research tool when it serves a formulated research purpose, is planned deliberately, recorded systematically and subject to checks and controls on validity and reliability. Merriam (1998) refutes the criticisms that refer to observation as being highly subjective and unreliable and points out that the role of the qualitative researcher demands selective attentiveness. Wragg remarks that classroom observation can help illuminate familiar events that have become routine to the participants themselves. This is particularly important in the context of observing teachers' classroom practice. I intend to use video technology to record the classroom observation. Harper (2000) considers that collecting and interpreting visual data is an effective observational technique in qualitative research. In the US, the National Research Council (2001b) notes that video technology has evolved into a powerful methodological tool for conducting research in education. Video has been used successfully in research in special education and with children with ASDs (Baranek, 1999; Janssen et al., 2003). Video can be replayed when recording and analysing the data, removes the pressure of having to make instant decisions, can be focused on events relevant to the research question and can be discussed with the participants at a later date (Hutchinson and Bryson, 1997: Wragg). The limitations of using video include the loss of information such as room temperature, smells, events out of camera shot and an increase in the time needed for analysis (Wragg). However it is to be noted that individuals with ASDs are much less influenced by what others think of their behaviour and therefore have no regard for socially-imposed consequences, which should limit the possibility of a halo effect on pupils' behaviour (Jones, 2002b). The possibility of a halo effect on teachers' behaviour remains and will have to be considered when interpreting the findings of the research. The fact that the teachers will be invited to select a lesson of

their choice and will be aware in advance of the time-frame for the classroom observation period further increases the possibility of a halo effect. It is recognised that the presence of an additional adult in the classroom may influence classroom dynamics (Wragg, 1999). This has particular significance in this research both in terms of the presence of an additional adult and the association between my role as an inspector in observing classroom practice and my role as a researcher. In order to limit the possibility of this association contributing further to a halo effect, I will emphasise that I am not working as an inspector in this context and will be conducting the research during a period of personal leave. I will also remain alert to the possibility of my role as inspector contributing to teachers' anxiety through adopting a reassuring, supportive and conversational manner during the classroom observation period. I will remain aware of the importance of minimising my effect on the research through dressing in an inconspicuous manner and positioning myself unobtrusively. I will aim to mitigate some of the limitations of video-recording through the use of the reflexive journal following the recording of classroom practice and through employing an assistant to video-record classroom practice. The assistant will have a post-graduate qualification in special education and experience of the learning and teaching of pupils with special educational needs. This will enable me to observe teacher:pupil interactions more closely, to direct the assistant to capture significant interactions and to use my observations of classroom practice as reference points for the subsequent interviews. The presence of another adult in the classroom, who is not an inspector, will also assist in diluting the possibility of my role as an inspector impacting negatively on the research. The assistant will not have a role in relation to the collection or analysis of the data.

I propose to record a lesson chosen by the teacher for a minimum of twenty minutes and a maximum of forty minutes duration. As the research will involve video-recording of pupils in classes, pupils' assent will be obtained through circulating a copy of the letter of explanation in Appendix E seeking parents' consent to the project. In addition, the aims and purpose of the research will be explained to the pupils by the class teacher on the previous day, using a social story format, in order to pre-empt the anxiety experienced by individuals with ASDs from unpredictable events. I will also provide the teacher with a copy of the text and accompanying

visual cues for the social story in Appendix F (Hodgdon, 1999; Baker; 2001; Gray and Leigh White, 2002; Howley and Arnold, 2005). I will use black and white drawings to alleviate any difficulty pupils with ASDs may have in deciphering coloured drawings or photographs (Bondy and Frost, 2002). Should a pupil indicate that he/she does not assent to the research, I will request that alternative arrangements are made for the pupil during the video-recording of the chosen lesson (Sieber, 1992). I will meet individually with support-staff in the classes prior to the video-recording in order to explain the aims, purposes and methods of the research and inform staff members that they are not required to participate in the research unless they wish to do so. I will also emphasise that the research is not being conducted during my work-time and is distinct from my role as an inspector with the DES.

### *Semi-Structured Interviews*

Interviews have been described as conversations with a purpose (Dexter, 1970; Gorden, 1992). Merriam (1998) points out that interviewing is necessary when we cannot observe behaviour, feelings or how people interpret the world around them. This is particularly pertinent in the context of the identification in the literature of the importance of engaging in both the systematic study of teachers' conceptualisations of teaching and the systematic observation of teaching (Clark and Peterson, 1986; Brown and McIntyre, 1993). Brown and McIntyre suggest that in order to inform theory, policy and practice in a comprehensive manner, an understanding of teaching should incorporate:

...an understanding of how teachers themselves make sense of what they do, how they construe and evaluate their own teaching, how they make judgements, and why, in their own, understanding, they choose to act in particular ways in specific circumstances to achieve their successes (Brown and McIntyre, p.1).

Burchell et al. (2002) argue that teachers' self-reports are an important vehicle in the process of evaluating the impact of CPD as they form the basis on which unique individual patterns of professional learning and development, and potential for impact, can be identified. Individual interviews will be conducted with each class

teacher and each school principal. Interviews with class teachers will focus on the genesis of their decision to teach pupils with ASDs, their experience of ITE and CPD, the concept of educational provision for pupils with ASDs, pedagogy, practices adopted in relation to the planning, monitoring, recording and assessment of pupils' learning and teaching, parental involvement, the availability of support structures and the impact of CPD on motivation. Interviews with school principals will focus on the concept of educational provision for pupils with ASDs, ITE and CPD, approaches to the learning and teaching of pupils with ASDs, the availability of support structures and issues related to the management of provision. See Appendix D for copies of interview schedules.

Teaching staff in the participants' individual schools will be invited to participate in a semi-structured focus-group interview in order to determine whether cascade effects of the CPD programme may be identified in the school. Focus-groups will comprise a maximum of three participants. Issues related to the concept of educational provision for pupils with ASDs, ITE and CPD, approaches to meeting the learning and teaching needs of pupils with ASDs and the availability of support structures will be explored with both the research participants who have completed the ASD-specific post graduate programme and those who have not completed the programme. Merriam (1998) advises that group interviews need to take account of group processes. Fontana and Frey (1998) observe that group interviews generate rich data, are flexible, assist in stimulating participants' recall and provide a perspective on the research question not available through individual interviews. The group-interviewer requires the skills of both an individual interviewer while also remaining sensitive to the script of questions and the evolving patterns of group interactions and dynamics (Fontana and Frey). I will remain conscious of the difficulty of the emerging group culture interfering with individual expression, the possibility of the group being dominated by one person and the importance of being alert to the impact of group dynamics on data collection. I will also distance my role as an inspector with the DES from that of researcher through assuring participants that the research is being conducted during a period of personal leave and is unrelated to my work as an inspector.

As the research is concerned with understanding rather than explaining the effects of ASD-specific CPD on practice in schools, the use of a semi-structured interview format is appropriate (Spradley, 1979). A highly structured interview format necessitates adhering to predetermined questions and therefore can impede access to participants' perspectives and understanding of the world, which is critical to providing answers to this research question (Fontana and Frey, 1998). I will adopt the model of flexibly wording all questions in order to allow me to respond to the emerging views of the participants, to further explore relevant issues and to enable me to use the classroom observation as a reference point. In wording questions, I will be concerned to ensure that the questions are framed in language that is familiar to the participants and that is easily understood (Merriam, 1998). I rejected the concept of adopting an unstructured approach as I was concerned to utilise the insights gained from the literature review in focusing participants' thought processes. I also intend to use probes in the form of seeking clarification or more details and judiciously using silence throughout the interviewing process, while being conscious of not putting the respondent under unwarranted pressure (Glesne and Peshkin, 1992). I plan to conduct two individual interviews and one focus-group interview in each school.

I will seek to establish a communicative atmosphere by attending to comfortable and non-threatening chair and desk placement, the elimination of background noise and environmental distractions and ensuring privacy. I will also direct attention towards ensuring that my dress code and grooming does not create a barrier with the participants, while also avoiding the appearance of masquerading (Gorden, 1992). Gorden suggests that the researcher might adopt a compromise between what is perceived as the dress of the organisation with which he/she is associated and that of the research participants. In conducting the interviews, I will direct attention to gaining the participants' trust and establishing rapport through placing myself as researcher in the participants' role rather than attempting to impose my preconceptions on the dialogue (Fontana and Frey, 1998). The interviews will be recorded using a voice-recording device, which will be positioned unobtrusively in order to avoid the possibility of the device compromising the research participants' responses.

Gorden (1992) advises that verbal and nonverbal aspects of the interviewing process should reinforce one another. Gorden identifies the key nonverbal factors that affect both the meaning of the questions and the motivation of the research participants as tone of voice, facial expression, gestures and posture. I will remain sensitive to the need to adopt optimum conversational distance, maintain a body position that conveys interest, maintain eye contact without staring, show appropriately responsive facial expression, employ a conversational tone of voice, pace conversation carefully and eliminate distracting behaviour mannerisms.

### *Pilot Testing of Research Procedures and Data-Collection Instruments*

Sieber (1992) describes pilot testing as an informal investigation with one or a few individuals in order to satisfactorily fine tune the research procedures. Sieber suggests that acquaintances of the researcher such as students or colleagues are typically involved in pilot testing.

I will engage in pilot testing in a two-teacher rural school in which a child with ASD is included in fifth class and supported by a part-time resource teacher and full-time SNA. This school has been involved in an evaluation project that I had carried out in the course of my work as a DES inspector. I chose this particular piloting site because of the good practice identified in the learning and teaching of pupils with ASDs during the evaluation project. Staff members in the school are acquaintances of mine and the school principal was a former colleague of mine when I was teaching. I also believe that my familiarity with the site will encourage the staff to provide useful advice in the further development of the research procedures and data-collection instruments.

I will combine the piloting of research procedures and data-collection instruments with work being conducted by the SESS and I will amend the parental letter of permission accordingly. See Appendix G for a copy of the amended letter. This will involve compiling video-data for a longer period of time than is intended in the research. However this will also allow me to reassess my own interviewing skills as I intend to engage with the teachers during the video-recording process and to subsequently review my own interviewing techniques and approaches. This is

commensurate with Brown and Dowling (1998) who advise that interview skills may be practiced through the creation of audio-tapes.

I will initially arrange to meet with the principal of the school and inform her in relation to the aims, purposes and processes of the piloting process. On receipt of an affirmative response from the principal, I will then arrange to meet with the resource teacher, class teacher and support staff and provide them with a similar explanation. I will distribute the letters seeking parental consent to the school and arrange to visit the school on a date that is convenient for the school staff. I will provide the resource teacher with a copy of the social story in Appendix F for the pupil with ASD.

I intend to pilot the interview schedules through a process of questioning and discussion with the school staff rather than in formal interviewing sessions. This decision is based on the aim of the pilot testing in establishing whether the interests and needs of the research participants are being addressed within the research framework (Sieber, 1992). I also hope to gain feedback from the respondents concerning their interpretation of the questions (Brown and Dowling, 1998).

### *Efficacy of Pilot Testing*

The pilot testing took place on Friday the fourteenth of December, 2006. I remained in the school from 9.30 am to 3.30 pm. I was accompanied by a member of the SESS, who engaged in the video-recording throughout this period. Particular issues emerged in relation to the following elements of the research process, which it is hoped will beneficially enrich and inform the future research process.

### *Parental Consent*

All of the parents had returned the parental consent forms and all except one parent agreed to have their children participate in the research project. One parent requested to meet me on the morning of the school visit in order to elicit more information with regard to the research. Following discussion, the parent agreed to have her children participate in the research provided that every effort would be made not to film the children's faces. This presented a dilemma for me in terms of seeking to capture the teachers' approaches to learning and teaching and simultaneously complying with the parent's requests. The assistance of the member of the SESS in conducting the video-

recording proved to be very beneficial as it was possible for me to prompt the video-recording of particular classroom events in an unobtrusive manner. The video-recording process was very successful and yielded a rich data store. This affirmed the proposal to employ an assistant during the research to undertake the video-recording. Due to the sensitive nature of the process, I will ensure that the assistant has post-graduate qualifications in special education and has experience in the learning and teaching of pupils with special educational needs.

### *Social Story*

The use of the social story proved to be very effective and the pupil with ASD responded in a positive manner during all classroom activities. The resource teacher expressed the view that the social story succeeded in pre-empting any anxiety that the pupil might have with the presence of the video-camera and unfamiliar adults.

### *Incorporating Photographic Evidence*

A considerable quantity of high-quality differentiated learning and teaching resources had been developed to facilitate the pupil with ASD in accessing the curriculum. While it was possible to use the video recorder to capture these resources, I felt that a digital camera could beneficially be used to augment the video data. Wragg (1999) points out that learning media are linked to teaching and learning styles and are a valuable source of data during classroom observation. Photography has been successfully incorporated into a research structure that has already been established for written ethnography and is therefore commensurate with the theoretical perspective espoused in this research (Atkinson, Jackson and Walmsley; 1997; Pink, 2007). Photographs have been used to support ethnographer's claims of authenticity and authority (Pink). I will adopt a realist approach to photography and use photographs as documentary evidence to support and illustrate research findings and thus exploit the rich possibilities inherent in photographic data. I will seek the teachers' consent to employing photographic evidence and also amend the parents' consent form accordingly. Photographs will be used to capture the essence of learning and teaching resources and environmental adaptations. Pupils will not be included in photographs.



### ***Classroom Observation Schedules***

The schedules proved to be very effective in determining the manner in which the classroom practice was designed to meet the learning and teaching needs of a pupil with ASD. I had intended to record the analysis of the data by hand, however the advantage of having the data video-recorded will enable me to engage in an iterative process of data analysis and input the observations electronically. This should assist in facilitating the analysis of the data at a later date. I will also amend the format of the schedules to include a section on researcher-comment as part of the field work as advised by Merriam (1998). I will include a section in the schedule on the availability and use of material resources and add a blank section in order to provide for the possibility of additional observations and comments. I noted that there may be a possibility of introducing a quantitative element to the recording through employing a rating scale based on the frequency with which the practices identified on the video-recording schedules occurred (Wragg, 1999). The scale will be based on numbers one to five, one will be equated with never or almost never, two with rarely, three with sometimes, four with often and five with always or almost always. In order to provide for a greater level of precision in the use of rating scales, each scale will be equated with a percentage of the time of the classroom observation period. One will be equated with zero to ten percent, two with eleven to twenty percent, three with twenty-one to fifty percent, four with fifty-one to ninety percent and five with ninety-one to a hundred percent. The assistance of an external observer will be elicited to independently assign rating scales. The percentage of inter-rater agreement will then be calculated for each item on the classroom observation schedule through calculating the percentage of incidences in which both the external observer and I agree on the assignment of a rating scale. However I concur with Wragg that while quantifying classroom events may offer some interesting insights, it cannot solely account for the complexity of learning and teaching and thus will be used in conjunction with qualitative analysis, photographic evidence and interview data sources.

### ***Interviewing Techniques and Schedules***

Merriam (1998) advises that the pilot interviews are crucial for honing interviewing skills and for ensuring that the questions used in the research yield the desired information. The opportunity provided by engaging in the SESS project provided

invaluable feedback on my own interview techniques as the project involved me being recorded in my interactions with school staff for the duration of the school day. I used the self-analysis questionnaire devised by Gorden (1992) to heighten the awareness of my own behaviour in order to improve it in the future. Questions were formulated in a manner that optimised participants' responses and a communicative atmosphere was evident. However, while I had sought to remain sensitive to the nonverbal factors identified by Gorden in delivering the questions, listening to the respondent, observing the respondent and probing responses, the automatic and unconscious nature of my nonverbal behaviour rendered it more difficult to control than I had anticipated. In particular I engaged in extraneous facial movements, which need to be refined to convey a calm, alert and responsive demeanour. The conversational pace was excessive at times and I did not use silence to good effect. I will consciously attend to these observed deficiencies during the field-work phase of the research. The need to probe questions further in order to ensure that relevant data emerges will also be necessary. I will include an additional question in relation to where the teacher might initially seek assistance when problems in meeting the needs of pupils emerge. A minimum of one hour is required for conducting all interviews as sufficient time is needed to attend to the physical arrangements of the interview setting, explain the purpose of the interview, the use of the digital-recording device, engaging in informal conversation and thanking the research participant both at the beginning and end of the interview process.

During the interviews, it became apparent that it would be preferable to elicit details with regard to teachers' qualifications and teaching experience through the use of specifically designed questionnaires. The diverse range of teaching qualifications, CPD programmes and teaching experience of the teachers was difficult to capture during the interview process and required considerable probing and additional questions in order to construct an accurate profile. I found I had to take notes, which I felt was distracting and interfered with the communicative aspect of the interviewing process. I will therefore devise a template to elicit these details and will request that class teachers complete the template in their own time. I will distribute the template on the day of the recording of the lesson and provide a stamped addressed envelope for the teachers to return the template to me. This will place less pressure on the

research participants to provide an immediate response to questions related to personal records while also saving time during interviews, which are being conducted during the busy school day and in teachers' own time (Kidder et al., 1986; Gorden, 1992; Kvale, 1996).

A related difficulty occurred with regard to the profile of the pupil with ASD. The literature review had identified the importance of acknowledging the impact of the severity of the ASD, associated special educational needs and level of intellectual ability on the learning and teaching programme provided for each individual child. Ascertaining these details was difficult during the interview process and therefore I will design a template to capture the profile of the pupils in the class. I will also distribute this template on the day of the recording of the lesson and request that it is returned with the teacher profile form. I will emphasise that names of pupils are not to be included on the template.

### *Analysis of Data*

A qualitative comparative approach to data analysis will be adopted based on the techniques and procedures recommended by Glaser and Strauss (1968.), Turner (1981), Miles and Huberman (1994) and Strauss and Corbin (1998). Grounded theory is a comparative method in which the researcher engages in an iterative process of comparing data with data, data with categories, and category with category (Winter, 1982; Strauss and Corbin, 1998; Charmaz, 2005). Data analysis will be informed by the theories, themes and concepts that emerge from the literature review and the researcher's experience (Glaser and Strauss, 1968). The approach is characterised by the absence of hypothesis and is sufficiently flexible to allow for the emergence of additional related themes. Grounded theory enables the researcher to adopt a focused and critical approach informed by the researcher's acquired knowledge of the field and thus progresses theoretical development in the area (Charmaz, 2005). I will remain conscious of the criticisms of qualitative data analysis in relation to the links with the actual data being tenuous and will seek to maintain an intimate connection with empirical reality through adopting systematic and comprehensive analytical procedures (Glaser and Strauss, Eishenhardt, 1989, Turner, 1994). I will endeavour to preserve the fluidity of the analytic process while adopting systematic and comprehensive procedures that can be replicated (Turner). A coding system will be

used in assigning units of meaning to the data (Miles and Huberman, 1999). In accordance with the principles of grounded theory, initially all data will be open-coded, through a line-by-line analysis of interview transcripts (Strauss and Corbin, 1998). The use of Max Qualitative Data Analysis (MAXQDA) software is particularly suited to adopting this analytic approach as it allows for close engagement with the data and enables codes to be assigned to data segments electronically in an uncomplicated and effective manner (VERBI Software, 2007). I will attach codes to words, phrases, sentences or whole paragraphs based on the meanings that emerge. I will choose titles for codes that are self-explanatory and linked to concepts identified in the literature review. Codes that require further clarification will be explicitly defined to avoid any potential ambiguity. Electronic memos will be attached to the codes to assist in clarifying emerging patterns in the data. These codes will then be distilled through a system of pattern-coding that clusters concepts together, which represent emerging patterns in the data. The use of MAXQDA facilitates the researcher in engaging simultaneously in open and pattern-coding as patterns emerging in the data can be identified during the process of open-coding. Finally selective-coding will be used to integrate and refine the patterns that are emerging. I propose to employ data display tables to assist in presenting the emerging patterns systematically (Miles and Huberman, 1999). Both manually-designed data display tables and electronic data display tables linked to MAXQDA will be used to present both the nature and frequency of thematically related codes. An electronic log book linked to MAXQDA will be used to record observations during data analysis, which will be later used to inform the findings of the research. I will utilise a reflexive journal throughout the research process, in order to provide an introspective, cathartic record of experiences, ideas, fears, mistakes, confusions, breakthroughs and problems that arise during the research (Spradley, 1979; Lincoln and Guba, 1985). I will also refer to this journal when analysing the data. Additionally I will use quantification of the qualitative data in order to further systematise observations, while accepting that focusing solely on numerical values compromises the concepts of qualities and essential characteristics (Miles and Huberman; Wragg, 1999).

Atkinson and Delamont (2005) observe that there are many aspects of culture that are intrinsically visual and which can only be grasped through their visual representations. This has particular resonance for pupils with ASDs who rely heavily on visual learning approaches to learning and teaching (Grandin, 1995; White and Worth, 2006). This is commensurate with Eisner (1995) who suggests that writing and traditional inquiry may not always convey the essence of a context in the same way that an image does. Photographs of learning and teaching environments and resources will be analysed and used to augment the emerging codes (Harper, 2005).

An audit trail substance and structure as detailed in Appendix H will be compiled to determine what records will be kept and the manner in which they will be filed (Lincoln and Guba, 1985; Schwandt and Halpern, 1988). I will elicit the support of an auditor with methodological expertise and the necessary distance from the substantive issues of the research to conduct the audit (Schwandt and Halpern). The auditor will be asked to conduct two audits during the research process with the purpose of certifying the audit trail substance and structure and providing methodological advice where necessary. In addition the auditor will be invited to furnish a final summary letter attesting to the certification of the audit trail and his role in the process. See Appendix I for a copy of this letter.

The selection of six schools where teachers have completed the post-graduate certificate programme and four schools where teachers have not completed the programme may result in a greater volume of codes being recorded for the six schools. This should be considered when interpreting the findings of the research.

### *Quantification Instruments*

Information inputted in the classroom observation schedules will be used in analysing the video-recorded data. I will also focus on the physical setting, the participants' behaviour, activities, interactions, conversations and issues that are remarkable for their low priority or absence (Patton, 1990; Merriam, 1998; Gannon and Kenny, 2006). I will develop a series of quantification instruments to augment the data on the classroom observation schedules. I acknowledge the limitations of quantification in reducing valuable data from a sophisticated and detailed account to

a series of crude categories and ciphers. However by adopting a combination of qualitative and quantitative procedures, this limitation is avoided and the observations are amplified and corroborated. A rating scale based on a continuum of one to five will be used to identify the frequency with which the practices identified on the video-recording schedules occurred (Wragg, 1999). I will also adopt the critical-event approach based on techniques developed by Flanagan (1949). Wragg describes critical events as specific instances of classroom behaviour, which are judged to be illustrative of some salient aspect of a teacher's style. I will record and analyse one critical event per classroom observation linked to the management of pupils' behaviour. A critical event will be one in which a pupil demonstrates off-task behaviour and the teacher's response to this will be recorded on the form contained in Appendix D. I will also record a time-sample every two minutes to record pupils' on and off-task behaviour from the video-data. See Appendix D for a copy of the template that will be used for this time-sampling process. These data will be presented in graph-format.

### *Trustworthiness*

Cohen et al. (2000) refer to synthesis as a piecing together of an account of the events embraced by the research problem. I will engage in both objective and systematic procedures of inductive reasoning in order to provide a balanced and coherent synthesis of data (Phelan and Reynolds, 1996). Believing that all research should be concerned with producing valid and reliable knowledge in an ethical manner, I will pay particular attention to the concept of trustworthiness (Merriam, 1998). Both participants and consumers of research should be assured that research findings are trustworthy and it therefore behoves researchers to account for the validity and reliability of the research process (Merriam). Since a qualitative perspective makes different kinds of knowledge claims, accounting for the trustworthiness of the research adopts different forms and approaches. Firestone (1987) observes that quantitative research should ensure that procedures have been stringently followed while the quality of the depiction in qualitative research should enable the reader to conclude the veracity of the findings. The conventional positivist research paradigm examines trustworthiness under the criteria of internal validity, external validity, reliability and objectivity (Lincoln and Guba, 1985). Lincoln and Guba suggest that

qualitative research should meet the criteria of credibility, trustworthiness, dependability and confirmability to reflect the underlying philosophy of the paradigm. As I intend to adopt a quantitative reporting dimension when analysing video data, I will remain cognisant of both the criteria suggested by Lincoln and Guba and the analogous positivist criteria of internal validity, external validity, reliability and objectivity. However the threats to validity and reliability can never be erased completely, rather the effects of these threats can be mitigated through directing attention to them during the research process (Cohen et al., 2000). Brantlinger et al. (2005) caution that checklists in relation to validity, reliability and objectivity should be used in a flexible and reflective way and researchers should direct attention towards succinctly clarifying the methods used and their associated rationale. It is not intended that the criteria related to trustworthiness and the measures adopted to mitigate the associated threats should be viewed as mutually exclusive phenomena but rather as interrelated concepts. The methods adopted in establishing trustworthiness are detailed in Table 6 below.

### *Internal Validity and Credibility*

Validity in research refers to whether the instruments and techniques used in fact measure what they purport to measure (Cohen et al., 2000). Internal validity seeks to demonstrate that the findings of the research can actually be sustained by the data (Merriam, 1998, Cohen et al.). Credibility seeks to demonstrate the probability that credible findings and interpretations are produced and to assess the isomorphism between the research findings and the realities they purport to reconstruct (Lincoln and Guba, 1985; Hammersley, 1990).

I will adopt a range of measures to assist in maintaining internal validity and credibility. Data triangulation is concerned with using multiple sources of evidence and Yin (2003) points out data triangulation in case-study research allows the researcher to address a broader range of historical, attitudinal and behavioural issues and develop converging lines of inquiry through following a corroboratory mode. The data collected from video-recordings, semi-structured interviews and schedules will contribute to maintaining the internal validity of the research. I will engage in a process of peer debriefing throughout the research in order to assist in maintaining

foci reflective of both the research question and the data collected. The debriefer will be a disinterested peer with a knowledge of both the substantive area of the inquiry and methodological issues. Peer debriefing provides an opportunity for an experienced peer to probe the researcher's biases, explore meanings and clarify the bases for interpretations as they pertain to substantive, methodological, legal, ethical or any other relevant matters (Lincoln and Guba, 1985). The exercise of being explicit in formulating something for presentation to a peer assists in exploring aspects of the research that might otherwise remain only implicit in the researcher's mind and fosters subsequent credibility in the research. (Lincoln and Guba; Robson, 2002). Lincoln and Guba observe that the debriefing process serves as a cathartic experience for the researcher through providing an opportunity to explore emotions and feelings that may be impeding the researcher's judgement and preventing the emergence of the next appropriate steps in the research process. Written records will be kept of each debriefing exercise and will be included in the audit trail. See Appendix J for the terms of reference to be provided for the critical friend, who will adopt the debriefing role. I will also use in vivo codes and direct extracts from the data and photographic evidence in generating the research findings (Glaser and Strauss, 1968; Strauss and Corbin, 1988; Pink, 2007).

The researcher is the primary instrument for data collection and analysis in qualitative research, which facilitates responsiveness to contextual factors (Guba and Lincoln, 1981; Merriam, 1998). Additionally data can be processed immediately and clarified as the research evolves and ambiguous responses can be probed (Guba and Lincoln). Conversely the researcher is limited by being human, which may result in mistakes being made, opportunities being missed and personal biases interfering (Merriam). In order to mitigate my effect on the research, I will remain conscious of and alert to my effect on the process, demonstrate a tolerance for ambiguity and display sensitivity to the research context and variables. I will also clarify my assumptions and theoretical orientations in the context of detailing researcher effect (Merriam).



### ***External Validity and Transferability***

External validity is concerned with assessing the degree to which the research findings can be generalised to the wider population, cases or situations (Cohen et al., 2000; Yin, 2003). Transferability assesses whether a judgement of transferability can be made between the sending context as portrayed in the research and a possible receiving context (Lincoln and Guba, 1985; Lewis and Linsday, 2000; Lincoln and Guba, 2000). I concur with Schwandt and Halpern (1998) that external validity in naturalistic research relies on the provision of a thick description of the process in order to contemplate transferability.

I will direct attention to maintaining external validity and transferability through engaging in a rich description of the research context, describing and investigating the relevant characteristics of the research participants and providing a transparent account of the procedures adopted throughout data collection and analysis.

### ***Reliability and Dependability***

Reliability examines the extent to which the research findings can be replicated (Merriam, 1998). Merriam cautions that reliability in the social sciences is problematic since human behaviour is never static. Research in the area of ASDs is particularly vulnerable as Schreibman (2005) advises that the well-known heterogeneity of this population usually results in heterogeneity of treatment outcome. Yin (2003) suggests that reliability demonstrates whether the research procedures can be repeated with the same results with the same research population. I concur with Yin that the emphasis should be on repeating the same case rather than replicating the research results in another context. Yin cites the goal of reliability as minimising errors and biases in a study. Schwandt and Halpern (1988) advise that the application of consistent and acceptable methodological procedures assists in maintaining dependability.

I will use a number of techniques to preserve reliability and dependability. Denzin (1998) describes methodological triangulation as employing more than one methodology of enquiry. I will employ a predominantly qualitative methodology augmented by a quantitative methodology. Time-sampling techniques will be used to measure on and off-task behaviour and rating scales will be used to augment the

video-observation schedules (Wragg, 1999). Inter-observer agreement will be used to enhance the reliability of these measures (Wragg). I will elicit the assistance of a former inspector colleague who is now a school principal of a mainstream primary school. This colleague has also a post-graduate qualification in special education and experience in the learning and teaching of pupils with special educational needs. In addition this colleague was involved in the evaluation of educational provision for pupils with ASDs conducted by the Inspectorate during the period from 2003 to 2005 (DES, 2006b). The percentage of inter-observer agreement will be reported in the final research account to assist in assessing the reliability of the data. I will compile an audit trail that details how data were collected, how categories were derived and how decisions were made throughout the research (Schwandt and Halpern, 1988; Merriam, 1998). This colleague has also agreed to conduct the audit as he has the appropriate methodological expertise and the necessary distance from the substantive issues of the research. It has been agreed that the auditor, having considered the checklist that has been compiled for the audit-trail, will furnish the final report in a non-standardised letter format (Schwandt and Halpern). See Appendix H for a copy of this report.

### ***Objectivity and Confirmability***

Objectivity is linked to the concept of empiricism and espouses an objective view of the world (Cohen et al., 2000). Confirmability is concerned with the outcomes of the research and emphasises that interpretations should be grounded in the data and formulated in a way that is consistent with the data. Maintaining objectivity and confirmability will permeate all of the criteria related to trustworthiness that have been developed for this research and will evolve from the consistent application of the techniques detailed in Table 6.

The concepts of objectivity and confirmability will be further consolidated through the process of inviting participants to respond to the findings and including a summary of their responses in the research.

**Table 6. Methods Adopted in Establishing Trustworthiness**

<b>Internal Validity and Credibility</b>	Triangulation of data sources and collection methods Peer debriefing In vivo codes and extracts from data Photographic evidence Attention to researcher-effect
<b>External Validity and Transferability</b>	Rich description of research context, research participants and process of data collection and analysis
<b>Reliability and Dependability</b>	Methodological Triangulation Audit Trail and Auditor
<b>Objectivity and Confirmability</b>	Application of all of the above techniques in a systematic and consistent manner Providing an opportunity for participant feedback on research findings

### **Ethical Considerations**

Ethics in the context of this research is linked to the anthropological ethical code that addresses responsibility for the chosen research methodology, relations with research participants and accountability to the researcher's government (Merriam, 1998). The methods referred to previously for establishing trustworthiness demonstrate the manner in which responsibility for the chosen research methodology will be addressed in the context of the research.

I will remain alert to the potentially negative impact of my role as an inspector with the DES in developing relations with the research participants in order to nurture mutually respectful interactions (Sieber, 1992). I will ensure that the participants understand that the research topic was chosen with a concern for the importance of building knowledge, enhancing CPD for teachers and seeking to contribute to the lives of individuals with ASDs. In order to dispel concerns in relation to the use of data by the DES, participants will be assured that their privacy will be paramount and that the data collected for the research will be used for the purposes of the research only. Prior to finalising the research, a copy of the findings of the research will be presented to participants in order to ensure that they are satisfied with regard to the manner in which they are presented and interpreted (Stake, 2005). During classroom

observation I will be cognisant of the possibility of witnessing teacher or pupil-behaviour, which would ordinarily require an intervention in my role as an inspector with the DES. However I will generally adopt a noninterventionist position in fieldwork, while also considering that a failure to intervene in situations where inappropriate behaviour is harmful constitutes a contravention of ethical considerations. I will be responsive to sensitive issues that may arise during fieldwork and refer participants for assistance in addressing difficulties related to the learning and teaching of pupils with ASDs that they may articulate during the process (Merriam, 1998).

In analysing the data, I will be particularly mindful of excluding data contradictory to both my personal and professional views. Responsibility to government will be interpreted as striving for accuracy, reporting on all data and disseminating findings (Merriam, 1998). Porter and Lacey (2005) caution against adopting a simplistic view of the relationship between research, policy and practice and recognise that political tensions are inevitable in evaluation research due to the direct links between evaluation and decision-making. This is particularly pertinent in the field of special education where the authors refer to the existence of a bottomless pit of need. In conducting this research, I will be disposed to the research being used to contribute to future policy development (Evans and Benefield, 2001). However my main priority lies in conducting the research with due regard to an underpinning moral imperative, rigour, transparency, connection to theory and research ethics, while trusting to its utility in the field of educational research (Paechter, 2003).

I will conduct the research at all times in accordance with the ethical review protocol under which the St. Patrick's College advises that research is conducted. The principles of beneficence, respect and impartiality will be considered during all stages (Sieber, 1992; Stake, 2000). I will also address unanticipated possibilities in accordance with these principles. Particular attention will be directed towards establishing the trustworthiness of the data (Moore et al., 1995; Denzin, 1998; Robson, 2002).

## Limitations

Wolcott (1982) cautions that the idea of the ethnography of any human group must be viewed as an idea, which is never complete. The purposive sampling of teachers and schools poses a threat to the possibility of generalising the findings from the specific sample selected as the findings may be unique to the teachers and schools selected (Robson, 2002). While I have directed specific attention to ethical considerations and mitigating the risks related to my role as an inspector with the DES on the research findings, my role may nevertheless potentially influence the manner in which participants respond to me and my interpretation of the data. It is also important to point out that the heterogeneous nature of the needs and abilities of pupils with special educational needs renders matching on age, sex and IQ difficult and limits the potential for comparisons between different research sites (Schindele, 1985). The analysis of the classroom observation sessions will be limited by the time-frame of twenty to forty minutes and by the teachers' role in choosing the lesson that they select to be video-recorded. Research participants will be aware that they are being video-recorded, which may alter teachers', support staff and pupils' behaviour and produce a halo effect (Guba and Lincoln, 1989; Montgomery, 1999). Giangreco and Taylor (2003) caution that a child's unique internal environments such as age, gender, genetics and health condition and the child's external environments such as educational context, culture, socioeconomic status and community affect how a child learns. Much of the research examined in the literature review is characterised by opportunistic and pragmatic sampling procedures, which further limit its generalisability. The intensity, frequency and duration of the application of learning and teaching approaches are not readily ascertainable and hence their effect cannot be precisely determined. To establish the precise effect of a particular approach necessitates comparison with other approaches in controlled settings and methods tend to become personalised as teachers adapt methods in line with their own style of teaching (Porter and Ashdown, 2002). Therefore the quest for a purist comparison of the effect of specific approaches remains elusive through the intervention of human factors.

However believing that generalisations are temporally and contextually dependent, I will adopt transparent methodological techniques in order to maintain objectivity in

the interplay of events and descriptions (Lincoln and Guba, 1985; Lincoln and Guba, 2000). Brantlinger et al. (2005) observe that qualitative research is not done for the purpose of generalisation but rather to produce evidence based on the exploration of specific contexts and particular individuals. Spooner and Browder (2003) suggest that high-quality educational research with individuals with low-incidence disabilities poses significant questions, uses appropriate designs, may be replicated and uses coherent reasoning to explain findings. Algozzine (2003) observes that an important goal of randomisation in research is to control the extent to which characteristics peculiar to the participants' interact with the intervention in peculiar ways that may compromise research findings. It is considered that randomisation distributes peculiar characteristics similarly across the conditions of a study and thereby improves the conclusions, interpretations and generalisations that may be derived from the outcomes. However Spooner and Browder argue that insisting on randomised trials in special education research may lead to many significant questions remaining unanswered. According to Giangreco and Taylor (2003) educational research is not as concerned with proof or establishing ultimate truths but rather in reducing uncertainty and assisting in developing better understanding. I concur with Bratlinger et al. that qualitative research does not make claims to create universal and essential knowledge for policy or offer universal prescriptions for practice, rather it describes research projects in order to demonstrate how findings can inform policymakers and practitioners. The focus of the research will be on a formative evaluation of practices and processes within a causal model that seeks to understand, explicate and investigate how the process works, its relationship to context and individual characteristics and circumstances (Porter and Lacey, 2005).

### **Conclusion**

A comprehensive conceptual framework of CPD based on the research questions informs the rationale for the selection of the research methodology detailed in this chapter. The discussion of the research findings will be presented with reference to the conceptual frameworks identified in the literature review and will also be informed by additional literature related to further themes that may emerge from the analysis of the data. The research findings are presented and discussed in the following two chapters. Details of the research population and contexts, an

examination of antecedent factors that can be identified as contributing to participants' choice of CPD programme and a summary of the research findings are provided in Chapter Eight. Subsequently findings in relation to the appropriateness of the content and process of the CPD programme in meeting participants' needs, cognitive, affective and behavioural learning, organisational support and change, participants' use of new knowledge and skills, pupils' on-task behaviour and additional emerging issues will be presented in Chapter Nine.

## CHAPTER EIGHT

### FINDINGS AND DISCUSSION ONE

#### Introduction

The findings were generated through an iterative process of carefully considering the data (Glaser and Strauss, 1968). The findings are presented conceptually and textual and photographic extracts from the data are employed to demonstrate the key features of emergent themes, support claims of authenticity and to preserve an emic emphasis (Wolcott, 1990; Cohen et al., 2000; Pink, 2007).

Initially interview data were open-coded with reference to conspicuousness in the data, relevance to the literature review and pertinence to the research focus (Strauss and Corbin, 1998; Silverman, 2000). Integrative diagrams and a colour-coding system, as illustrated in Appendix K, were used to display the interrelationships of emerging codes and quantify their occurrence (Miles and Huberman, 1994). Data were pattern-coded in accordance with the similarities and links that were evident between open-codes. Selective coding of data was used to discover and elucidate findings as they related to the research question. Saturation of data codes was achieved when it was evident that there was no further conceptual information to indicate new codes or the extension of existing ones (Strauss and Corbin).

Comparative analysis of the data assisted in generating themes (Glaser and Strauss, 1968; Burgess, 1984; Strauss and Corbin). Max Qualitative Data Analysis (MAXQDA) software was used in coding the data (VERBI Software, 2007).

Video data were analysed through a process of quantitative and qualitative analysis. A scaling system based on linking rating scales to a percentage of the classroom observation period was devised in analysing the video data. A series of scales was adopted based on numbers one to five, where one was equated with never or almost never, two with rarely, three with sometimes, four with often and five with always or almost always. These scales were equated with a percentage of the time of the classroom observation period. One was equated with zero to ten percent, two with eleven to twenty percent, three with twenty-one to fifty percent, four with fifty-one to ninety percent and five with ninety-one to a hundred percent. As demonstrated in Table 20 below, the quantification of classroom observation provides an interesting



overview of individual teachers' practices, however it is limited both by the scope for imprecision in the use of the quantification system and the fact that it is being applied to periods of between twenty-six and fifty-four minutes of direct classroom observation (Wragg, 1999). There is also evidence in Table 20 of a significant number of rankings at level five, which is equated with always or almost always and ninety-one to a hundred percent of the classroom observation period. I was conscious of the possibility of a ceiling effect when employing these rating scales and five is therefore equated with an interval rather than a fixed point on a scale (Davis and Rose, 2000). While teachers were invited to choose a lesson for a minimum period of twenty minutes and a maximum of forty minutes, the duration of lessons ranged from twenty-six to fifty-four minutes. It is also important to point out that qualitative analysis of classroom observation data was also conducted in order to avoid exclusive reliance on the rating scale in analysing the data. These factors should be considered in interpreting the findings of the research. Inter-rater agreement was calculated for each item on the classroom observation schedule and a percentage rate of agreement identified. This elucidates the process and avoids the possibility of a composite score disguising categories where disagreement is higher. High rates of inter-rater agreement were generally evident, which is suggestive of a high level of reliability in the analysis of the video data. Ninety percent agreement was recorded for nine items, one hundred percent for nine items, eighty percent for three items, seventy percent for two items and sixty percent for one item. These data will be further referred to in presenting the research findings and augmented by interview data, pupil and research participant profiles, critical event data, records of on and off-task behaviour and photographic data. Pupils' levels of on and off-task behaviour were analysed through the time-sampling of video data at two-minute intervals and the recording of a critical event for each classroom observation period that was related to the management of pupils' behaviour. In order to assist with confirmability and allow participants' voices to be included, a summary of participant responses to the findings of the research is also provided in Chapter Nine.

The findings are presented with reference to the two frameworks for the evaluation of the programme of CPD that emerged from the literature review, which are used to position the research findings and present the conclusions and recommendations.

Initially in this and the following chapter, discrete elements of the CPD programme are isolated and evaluated with reference to the model for evaluating programmes of CPD detailed in the previous chapter (Guskey, 2000; Muijs et al., 2004).

Subsequently the analysis of the discrete elements of CPD as they relate to the functions, aims and areas of impact of CPD suggested by the combined theoretical positions of Logan and Sachs (1991), Grundy and Robinson (2004), Powell et al. (2003) and Day (1999) are explored in Chapter Ten. I envisage this process as a flexible framework in which discrete elements of the CPD models are not mutually exclusive and scope for additional elements to emerge is accommodated.

Muijs et al. (2004) suggest that policy backgrounds and other factors affecting the choice and development of the programme in addition to the participants' motivation behind and reasons for choosing the particular programme should be considered when examining the Antecedent Level. Policy backgrounds related to the programme have been detailed in the literature review and will be referred to further as they emerge in the research findings. Participants' motivation and reasons for choice of programme are detailed in the Antecedent Level below. The appropriateness of content and process in meeting participants' needs, participants' cognitive, affective and behavioural learning, organisational support and change, participants' use of new knowledge and skills and the identification of factors related to pupils' on and off-task behaviour will be examined in Levels One to Five in Chapter Nine (Guskey, 2000). Table 7 provides a summary of the model within which the research findings will be presented. Finally additional issues that emerge during the data analysis will be detailed.

**Table 7. A Summary of Research Findings**

**Antecedent Level**

*Motivation and Reasons for Choice of Programme*

*Prior Professional Experiences*

*Attitudes to New Professional Challenges*

**Level One: Appropriateness of Content and Process**

*Content*

*Process*

**Level Two: Participants' Cognitive, Affective and Behavioural Learning**

*Knowledge and Understanding of Autistic Spectrum Disorders*

*Classroom Organisation*

*Accommodation of the Triad of Impairments*

*Curriculum and Teaching Approaches*

**Level Three: Organisational Support and Change**

*Organisational Support*

*The Role of the Principal*

*Support of Teaching Colleagues*

*Multi-Disciplinary Support*

*Special Needs Assistants*

*Organisational Change*

*Developing Staff's Knowledge and Understanding of Autistic Spectrum Disorders*

*Facilitating the Development of an Inclusive School Ethos*

*Acknowledgement of Teachers' Expertise*

**Level Four: Participants' Use of Knowledge and Skills**

*Heterogeneous Needs*

*Assessment*

*Individualised Planning*

*Liaising with Parents*

**Level Five: On-Task Behaviour**

**Additional Emerging Issues**

*Teacher Articulation*

*Autistic Spectrum Disorder-Specific Approaches*

*Litigation and the Media*

*Special Education Support Service*

*Probation*

*Pupil and Sibling Awareness*

*Extending the Availability of Continuing Professional Development*

For the purposes of preserving the anonymity of the research participants including the pupils with ASDs, the names of individual research participants, schools and

references to pupils have been changed. Photographic data are airbrushed where it is necessary to preserve research participants' anonymity. Schools in which teachers have completed the post-graduate certificate programme are referred to by the letters A to F and the remaining schools by the letters G to J.

The research population and contexts will be described prior to presenting the findings of the research in order to situate the findings, enhance the external validity of the research and assist in transferability.

### **Research Population and Contexts**

Of the eighty-seven letters sent to the teachers who had completed the post-graduate certificate programme between 2001 and 2004, a total of twenty teachers responded and indicated their interest in participating in the research process. An additional respondent indicated that she was unable to participate in the research due to other commitments. Research participants comprised ten teachers in ten classes for pupils with ASDs, ten school principals and eighteen teachers in other classes in the schools. The age range of participants was from age twenty-one to sixty-five years. All research participants, excluding the two focus-group participants in one school, provided details of their teaching and academic qualifications, teaching experience and CPD accessed. I provided all focus-group participants with relevant data-collection forms and stamped-addressed envelopes on the day of the interview and asked that they would forward these when completed. Having not received a response from one school, I followed this request with a phone-call to the school and forwarded additional copies of the data-collection forms and stamped-addressed envelopes. I did not receive responses from either focus group participant and decided not to pursue this further as it may have been perceived as hostile and intimidating. These focus group participants contributed openly during the interview process and had considerable prior teaching experience with pupils with ASDs.

Tables 8 and 9 below provide details of the forty-five pupils with ASDs aged from three years and nine months to sixteen years and eight months, enrolled in the classes participating in the research.

**Table 8. Profile of Twenty-Seven Pupils in Schools Where Teachers Had Completed the Post-Graduate Certificate Programme**

Schools	Pupils' Age at Date of Video*	Gender*	Assessment*	Additional Needs
<b>School A</b>	5 yrs – 2 mths	M	ASD	Not Identified
<b>Mainstream</b>	5 yrs – 5 mths	M	ASD	Not Identified
<b>19 Teachers</b>	5 yrs – 1 mth	M	ASD	Not Identified
<b>1 Principal A*</b>	4 yrs – 5 mths	M	ASD	Not Identified
<b>6 SNAs*</b>	4 yrs – 6 mths	M	ASD	Not Identified
<b>222 pupils</b>	3 yrs – 9 mths	F	ASD	Not Identified
<b>School B</b>	5 yrs – 11 mths	M	ASD	Mild GLD*
<b>Mainstream</b>	4 yrs – 4 mths	M	ASD	Mild GLD*
<b>3 Teachers</b>	6 yrs – 1 mth	M	ASD	Mild GLD*
<b>1 Principal T*</b>	5 yrs – 1 mth	M	ASD	Mild to Moderate GLD*
<b>6 SNAs*</b>	4 yrs – 5 mths	M	ASD	Mild to Moderate GLD*
<b>21 pupils</b>	5 yrs – 4 mths	M	ASD	Mild GLD*
<b>School C</b>	9 yrs	M	ASD	Severe GLD*
<b>Special</b>	7 yrs – 11 mths	M	ASD	Severe GLD*
<b>11 Teachers</b>	7 yrs – 8 mths	M	ASD	Severe GLD and ADHD*
<b>28 SNAs*</b>				
<b>33 pupils</b>				
<b>School D</b>	9 yrs – 11 mths	M	ASD	Borderline Mild GLD*, ADHD, Receptive Language Delay.
<b>Mainstream</b>				
<b>11 Teachers</b>	10 yrs – 7 mths	F	ASD	Mild GLD*, Language Delay, ADHD*, ODD*, query Tourette Syndrome.
<b>1 Principal A*</b>				
<b>12 SNAs</b>	11 yrs – 10 mths	M	ASD	Moderate GLD* and Severe Language Delay.
<b>151 Pupils</b>				
	11 yrs – 8 mths	M	ASD	Mild GLD*, Language Delay, ADHD*, Dyspraxia, Challenging Behaviour.
	11 yrs – 5 mths	M	ASD	Mild GLD*, Language Delay, ADHD, ODD, Challenging Behaviour.
	12 yrs – 6 mths	M	ASD	Borderline Mild GLD* and Language Delay.
<b>School E</b>	7 yrs – 4 mths	M	Asperger's Syndrome	Sensory and Social Difficulties.
<b>Mainstream</b>				
<b>10 Teachers</b>	7 yrs – 8 mths	M	ASD	Mild GLD* and Severe Speech and Language Deficit.
<b>1 Principal A*</b>				
<b>2 SNAs*</b>	7 yrs – 5 mths	M	ASD	Expressive and Receptive Language Delay and Disorder.
<b>185 Pupils</b>				
<b>School F</b>	9 yrs – 5 mths	M	ASD	Mild GLD*, Impulsivity, Concentration Difficulties and Challenging Behaviour.
<b>Mainstream</b>				
<b>9 Teachers</b>	9 yrs – 10 mths	F	ASD	Mild GLD*, Epilepsy, Problems related to Medication and Challenging Behaviour
<b>1 Principal T*</b>				
<b>4 SNAs*</b>	7 yrs – 7 mths	M	ASD	Not possible to assess level of GLD*, Impulsivity, Concentration Difficulties and Challenging Behaviour.
<b>144 Pupils</b>				

**Video\* - Yrs: Years; Mths: Months; Gender\* - M: Male; F: Female; Assessment\* - ASD: Autistic Spectrum Disorders; A\* - Administrative Role; T\* - Teaching Role; SNAs – Special Needs Assistant.**

Three pupils were absent from school during the classroom observation periods and forty-two pupils in total were observed. Five teachers were teaching in classes for pupils with ASDs in mainstream primary schools and five teachers were teaching in classes for pupils with ASDs in special schools. One special school catered for pupils

with severe to profound general learning disabilities, two schools catered for pupils with moderate and severe to profound general learning disabilities, one school catered for pupils with mild general learning disabilities and one school catered for pupils with mild to moderate general learning disabilities. The profile of pupils with ASDs confirms the heterogeneous needs of this population as detailed in the literature review.

**Table 9. Profile of Eighteen Pupils in Schools Where Teachers Had Not Completed the Post-Graduate Certificate Programme**

Schools	Pupils' Age at Date of Video*	Gender*	Assessment*	Additional Needs
<b>School G</b>	16 yrs – 1 mth	M	ASD	Moderate GLD*
<b>Special</b>	yrs–5 mths	M	ASD	Mild to Moderate GLD*
<b>10 Teachers</b>	14 yrs–7 mths	M	ASD	Moderate GLD*
<b>1 Principal A*</b>	13 yrs–5 mths	M	ASD	Mild GLD*and Epilepsy
<b>24 SNAs*</b>	16 yrs	M	ASD	Moderate GLD*
<b>61 pupils</b>	9 yrs – 7 mths	M	ASD	Moderate GLD* and Asthma
<b>School H</b>	9 yrs – 5 mths	M	ASD	Borderline Mild GLD*
<b>Special</b>	10 yrs	M	ASD	Mild GLD*
<b>10 Teachers</b>	8 yrs–11 mths	M	ASD	Mild GLD*
<b>1 Principal A*</b>	8 yrs–10 mths	M	ASD	Borderline Mild GLD*
<b>26 SNAs*</b>	10 yrs	F	ASD	Moderate GLD*
<b>53 pupils</b>	10 yrs–7 mths	M	ASD	Borderline Mild GLD*
<b>School I</b>	15 yrs–10 mths	M	ASD	Mild GLD*
<b>Special</b>	16 yrs–8 mths	M	ASD	Mild GLD*, OCD*, Language Disorder and Epilepsy
<b>10 Teachers</b>				Mild GLD*
<b>1 Principal A*</b>	12 yrs–10 mths	M	ASD	Borderline Mild GLD*
<b>11 SNAs*</b>	12 yrs–11 mths	M	ASD	
<b>82 pupils</b>				
<b>School J</b>	6 yrs -11 mths	M	ASD	Moderate GLD*, Speech and Sensory Integration Difficulties.
<b>Special</b>				
<b>10 Teachers</b>	6 yrs- 8 mths	F	ASD	Severe GLD*, Speech Difficulties, and Significant Behaviour Difficulties.
<b>1 Principal A*</b>				
<b>23.5 SNAs</b>				
<b>57 Pupils</b>				

**Video\* - Yrs: Years; Mths: Months; Gender\* - M: Male; F: Female; Assessment\* - ASD: Autistic Spectrum Disorders; A\* - Administrative Role; T\* - Teaching Role; SNAs – Special Needs Assistant; OCD\* - Obsessive Compulsive Disorder**

Tables 10 to 19 provide details of the teaching experience of the teachers in the ten classes. These ten teachers had teaching experience ranging from two to thirty-three years. This experience included teaching in mainstream primary and post-primary schools, special education settings and classes for pupils with ASDs. The ten

principals had teaching experience ranging from twenty-one to thirty-eight years, which included teaching and administrative roles. The sixteen focus-group participants who returned the requested information forms had teaching experience in mainstream and special education ranging from one and a half years to thirty-three years. All teachers had initial teaching qualifications. Additionally the majority of teachers had post-graduate qualifications in a range of areas related to education. All class teachers, six principals and eleven focus-group participants had attended programmes of CPD related to special education.

Following the launch of the Primary School Curriculum in 1999, all primary teachers and teachers in special schools participated in a national programme of inservice, which commenced in the 1999-2000 school year and was completed in the 2006-2007 school year (NCCA, 2009a; McAuliffe, 2010). This programme was delivered by the Primary Curriculum Support Programme (PCSP), a support programme established by the DES comprising teachers on secondment from their posts in schools (Primary Professional Development Service, 2009). Inservice in individual subject areas was preceded by a two-day introduction to the curriculum, which included an overview of the range of subjects, approaches and methodologies. Drama and the integration of History and Geography concluded the programme of inservice in the 2006-2007 school year, the year during which the field work for this research study was conducted. In-school support in the implementation of the curriculum has been available to schools from the 2001-2002 school year to the present. The research did not identify the areas of inservice that individual teachers or schools had accessed from the PCSP. However as inservice was compulsory for all schools and had been provided in all subject areas except Drama at the time of the field work for this research, it can be stated with reasonable certainty that all schools who participated in the research had availed of inservice from the PCSP by the 2006-2007 school year.

**Table 10. Profile of Staff in School A**

<b>Staff</b>	<b>Initial Teaching Qualification and Other Academic Qualifications</b>	<b>Special Education Continuing Professional Development Programmes Attended</b> <b>(Ranging in Duration from 1-5 Days unless Otherwise Stated)</b>	<b>Teaching Experience</b>
<b>Class Teacher</b>	Bachelor of Education Post-Graduate Certificate in ASD	Theo Peeters; Picture Exchange Communication System; Gary La Vigna Diagnosis and Assessment in ASD; Sensory Integration ;	19 years - Mainstream 6 years - ASD Class
<b>Principal</b>	Master of Education	Two-Day Special Education Support Service Conference; One – Day National Conference.	
<b>Principal</b>	Bachelor of Education Master of Education	None	16 years - Mainstream 5 years - Administrative Principal
<b>Focus-Group Participant 1</b>	Bachelor of Education Undertaking Masters of Education	Reading Recovery Programme; Picture Exchange Communication System; One-day Special Education Support Service on Understanding Autism.	5 years-Mainstream 1.5 years - ASD Class
<b>Focus-Group Participant 2</b>	Bachelor of Education	Special Education Module in Year 3 of Bachelor of Education Programme.	1.5 years - Mainstream



**Table 11. Profile of Staff in School B**

<b>Staff</b>	<b>Initial Teaching Qualification and Other Academic Qualifications</b>	<b>Continuing Professional Development Programmes Attended (Ranging in Duration from 1-5 Days unless Otherwise Stated)</b>	<b>Teaching Experience</b>
<b>Class Teacher</b>	Montessori Teaching Degree Post-Graduate Certificate in ASD	Sleep Disorders in People with Dual Sensory Disabilities; On-line Course on Understanding Autism; Snoezelen Workshop; Picture Exchange Communication System; On-line Course on Applied Behaviour Analysis; Managing Challenging Behaviour; Treatment and Education of Autistic and related Communication handicapped Children (TEACCH); Two-Day Special Education Support Service Conference; One –Day National Conference.	1 year in Centre for Deaf/Blind Adults 3.5 years – ASD Class
<b>Principal</b>	National Teacher Graduate Diploma Graduate Diploma in Computers in Education	None.	7 years - Mainstream 31 years- Teaching Principal
<b>Focus-Group Participant 1</b>	Bachelor of Education	On-line Course on Understanding Autism; Treatment and Education of Autistic and related Communication handicapped Children (TEACCH); Two-Day Special Education Support Service Conference; 1 day course with speech and language therapist.	1 year - Special School 12 years - Mainstream 1 year+7 months - ASD Class

**Table 12. Profile of Staff in School C**

Staff	Initial Teaching Qualification and Other Academic Qualifications	Continuing Professional Development Programmes Attended (Ranging in Duration from 1-5 Days unless Otherwise Stated)	Teaching Experience
<b>Class Teacher</b>	Bachelor of Education Master of Education Diploma in Social Studies Certificate in Assistive Technology Post-Graduate Certificate in ASD	Induction Programme for Teachers working with Pupils with Severe to Profound General Learning Disabilities; LÁMH Manual Signing Programme; Crisis Prevention Intervention Training; Treatment and Education of Autistic and related Communication handicapped CHildren (TEACCH); Sensology: The Theory of Sensory Experience; Five-day Summer Course on Understanding Autism; Supporting Positive Behaviour in ASD.	10 years + 4 months - Mainstream 9 years + 3 months – Special School
<b>Principal</b>	Bachelor of Education Master of Education Post-Graduate Certificate in ASD	Induction Programme for Teachers working with Pupils with Severe to Profound General Learning Disabilities; On-line Course on Understanding Autism; On-line Course on Understanding Dyslexia.	8 years - Mainstream 6 years - Class for Pupils with Mild General Learning Disabilities 4 years - Special School 5 years - Special School Administrative Principal
<b>Focus-Group Participant 1</b>	Montessori Teaching Degree	Three- day Programme for Teachers of Pupils with ASDs; Treatment and Education of Autistic and related Communication handicapped CHildren (TEACCH); Picture Exchange Communication System; Behaviour Management; Rita Jordan; Two-Day Special Education Support Service Conference	1 year - Special School 1 year -Special Pre-School 3 years - Special School
<b>Focus-Group Participant 2</b>	Bachelor of Education Higher Diploma in Ed.	Intensive Interaction; Multi-Sensory Programme; Crisis Prevention Intervention Training.	2 years - Second-Level 6 years - Special School

**Table 13. Profile of Staff in School D**

<b>Staff</b>	<b>Initial Teaching Qualification and Other Academic Qualifications</b>	<b>Continuing Professional Development Programmes Attended (Ranging in Duration from 1-5 Days unless Otherwise Stated))</b>	<b>Teaching Experience</b>
<b>Class Teacher</b>	Montessori Teaching Diploma Post-Graduate Certificate in ASD Master of Education	Conference on Understanding Autism; Treatment and Education of Autistic and related Communication handicapped CHildren (TEACCH); Hanen Programme; Course on Sensory Integration, Speech and Language Therapy and Play Therapy; Applied Behaviour Analysis (ABA); Carol Gray; Tony Attwood; Diagnostic Assessment; Transitions; John Clements; Theo Peeters; Audrey Cregan; On-line ABA Course.	20 years - Special School 6 years - Special School for Pupils with ASDs. 7 years + 9 months – ASD Class
<b>Principal</b>	National Teacher Graduate Diploma Bachelor of Arts Master of Science in Information Technology in Education	None	33 years - Mainstream 1 year - Learning Support 7 months - Administrative Principal
<b>Focus-Group Participant 1</b>	National Teacher Graduate Diploma Bachelor of Arts	One-week Programme for Resource Teachers.	28 years – Mainstream 7 months – Learning Support Teacher
<b>Focus-Group Participant 2</b>	Post-Graduate Certificate in Education. L.L.B.	Treatment and Education of Autistic and related Communication handicapped CHildren (TEACCH).	8 years - Mainstream 2 years – Resource Teacher

**Table 14. Profile of Staff in School E**

<b>Staff</b>	<b>Initial Teaching Qualification and Other Academic Qualifications</b>	<b>Continuing Professional Development Programmes Attended (Ranging in Duration from 1-5 Days unless Otherwise Stated)</b>	<b>Teaching Experience</b>
<b>Class Teacher</b>	National Teacher Graduate Diploma Bachelor of Arts Higher Diploma in Education Board Certified Associate Behaviour Analyst Post-Graduate Certificate in ASD	Remedial Teachers' Course.	10 years - Mainstream 15 years - Learning Support 4 years + 6 months - ASD Class
<b>Principal</b>	National Teacher Graduate Diploma Bachelor of Education Post-Graduate Cert in Remedial Education Post-Graduate Diploma in German Post-Graduate Diploma in Counselling Modules in Educational Management	On-line Applied Behaviour Analysis Course; Picture Exchange Communication System.	19 years - Mainstream 5 years - Adult Education in English as a Second Language 7 years - Administrative Principal
<b>Focus-Group Participant 1</b>	Post-Graduate Certificate in Education. Bachelor of Social Science Diploma in Social Research Methods	None.	5 years - Third Level. 6 months - Learning Support
<b>Focus-Group Participant 2</b>	Bachelor of Education Bachelor of Arts	None	27 ears - Mainstream

**Table 15. Profile of Staff in School F**

<b>Staff</b>	<b>Initial Teaching Qualification and Other Academic Qualifications</b>	<b>Continuing Professional Development Programmes Attended (Ranging in Duration from 1-5 Days unless Otherwise Stated)</b>	<b>Teaching Experience</b>
<b>Class Teacher</b>	Bachelor of Education Post-Graduate Certificate in ASD Master of Education Post-Graduate Programme in Applied Behaviour Analysis	Treatment and Education of Autistic and related Communication handicapped CHildren (TEACCH); Picture Exchange Communication System.	21 years - Mainstream 8 years - ASD Class
<b>Principal</b>	National Teacher Graduate Diploma	None.	1 year - Special School 22 years - Mainstream 9 years - Teaching Principal
<b>Focus-Group Participant 1</b>	National Teacher Graduate Diploma Bachelor of Education Higher Diploma in Remedial and Compensatory Education	One-week course on Understanding Autism; Summer Courses on a Variety of Aspects of Special Education.	26 years - Mainstream 7 years - Learning Support/Resource Teacher

**Table 16. Profile of Staff in School G**

<b>Staff</b>	<b>Initial Teaching Qualification and Other Academic Qualifications</b>	<b>Continuing Professional Development Programmes Attended (Ranging in Duration from 1-5 Days unless Otherwise Stated)</b>	<b>Teaching Experience</b>
<b>Class Teacher</b>	<p>Post-Graduate Certificate in Education</p> <p>Part-time One-year Open University Course on Special Needs in Education</p>	<p>Special Education Part-time One-year Induction Course; One-Year Part-time Course on the Psychology of Disturbed Children and Adolescents; Induction Programme for Teachers working with Pupils with Severe to Profound General Learning Disabilities; On-line Applied Behaviour Analysis Course; On-line Course on Understanding Autism; Treatment and Education of Autistic and related Communication handicapped Children (TEACCH); Crisis Prevention Intervention Training.</p>	<p>18 years - Mainstream</p> <p>9 years+6 months – Special School</p> <p>5 years - ASD Class</p>
<b>Principal</b>	<p>National Teacher Graduate Diploma</p> <p>Diploma in Speech and Drama</p>	<p>Induction Programme for Teachers working with Pupils with Severe to Profound General Learning Disabilities; Attention Deficit Hyperactivity Disorder; On-line Applied Behaviour Analysis Course; On-line Course on Understanding Autism; Crisis Prevention Intervention Training; Treatment and Education of Autistic and related Communication handicapped Children (TEACCH).</p>	<p>3 months - Mainstream</p> <p>24 years - Special School</p> <p>6 years - Administrative Principal</p>
<b>Focus-Group Participant 1</b>	<p>National Teacher Graduate Diploma</p>	<p>Treatment and Education of Autistic and related Communication handicapped Children (TEACCH); On-line Applied Behaviour Analysis Course; On-line Course on Understanding Autism; On-line Course on Attention Deficit Hyperactivity Disorder.</p>	<p>3 years - Second-Level</p> <p>27 years - Special Schools</p>
<b>Focus-Group Participant 2</b>	<p>Bachelor of Education</p> <p>Diploma in Special Education</p> <p>Diploma in Counselling</p>	<p>Induction Programme for Teachers working with Pupils with Severe to Profound General Learning Disabilities; On-line Course on Understanding Autism; Crisis Prevention Intervention Training; Managing Challenging Behaviour.</p>	<p>23 years – Special School</p>

**Table 17. Profile of Staff in School H**

<b>Staff</b>	<b>Initial Teaching Qualification and Other Academic Qualifications</b>	<b>Continuing Professional Development Programmes Attended (Ranging in Duration from 1-5 Days unless Otherwise Stated)</b>	<b>Teaching Experience</b>
<b>Class Teacher</b>	Bachelor of Arts Post-Graduate Certificate in Education	Interactive Play; Treatment and Education of Autistic and related Communication handicapped Children (TEACCH); Computer Programme Boardmaker Training.	2 years - Special School
<b>Principal</b>	Bachelor of Education Certificate in Remedial Education Post-Graduate Certificate in ASD	Treatment and Education of Autistic and related Communication handicapped Children (TEACCH); SPELL Course.	4 weeks - Mainstream 24 years – Special School 3 years - Administrative Principal
<b>Focus-Group Participant 1</b> <b>Focus-Group Participant 2</b>	I provided focus-group participants with relevant data-collection forms and stamped-addressed envelopes to forward completed forms on the day of the interview. I subsequently followed this request up with a phone-call to the school and I forwarded relevant forms and stamped-addressed envelopes again. I did not receive responses from either focus group participant and decided not to pursue this further as it may be perceived as hostile and intimidating.		

**Table 18. Profile of Staff in School I**

Staff	Initial Teaching Qualification and Other Academic Qualifications	Continuing Professional Development Programmes Attended (Ranging in Duration from 1-5 Days unless Otherwise Stated)	Teaching Experience
<b>Class Teacher</b>	Bachelor of Religious Education	On-line Course on Understanding Autism; Treatment and Education of Autistic and related Communication handicapped Children (TEACCH); Picture Exchange Communication System; Holistic Approach to NeuroDevelopment and Learning Efficiency (HANDLE)	5 months - Mainstream 2 years – ASD Class
<b>Principal</b>	National Teacher Graduate Diploma Diploma in Special Education Master of Education	Modular Certificate Course in Dyslexia; Treatment and Education of Autistic and related Communication handicapped Children (TEACCH); Information and Communication Technology Course; Summer Courses related to Special Education.	5 years - Mainstream 1 year - Special Class in Mainstream School 27 years - Special School 2 years - Administrative Principal
<b>Focus-Group Participant 1</b>	Bachelor of Education Diploma in Remedial Education Masters in School Chaplaincy and Pastoral Care	None.	6 years - Mainstream 22 years - Special School
<b>Focus-Group Participant 2</b>	Graduate Diploma in Education Masters of Arts	Interactive Teaching Methodologies; On-line Course on Managing Behaviour; Digital Video-Tutor Courses.	3 years - Second-Level 5 years - Special School Part-time tuition with visually impaired students for 10 years.



**Table 19. Profile of Staff in School J**

<b>Staff</b>	<b>Initial Teaching Qualification and Other Academic Qualifications</b>	<b>Continuing Professional Development Programmes Attended (Ranging in Duration from 1-5 Days unless Otherwise Stated)</b>	<b>Teaching Experience</b>
<b>Class Teacher</b>	<p>Bachelor of Arts in Special Education</p> <p>Teacher of the Handicapped Certificate</p> <p>Masters of Education</p> <p>Board Certified Associate Behaviour Analyst</p>	<p>100 hours of Continuing Professional Development in the United States leading to Highly Qualified Teacher Recognition; Challenging Behaviour;</p> <p>Two-Day Special Education Support Service Conference; Picture Exchange Communication System; Treatment and Education of Autistic and related Communication handicapped CHildren (TEACCH); Social Stories; Managing Challenging Behaviour; Floor Play; Hanen; Social Skills; PEP-3.</p>	<p>7 years - Special Education Provision in the United States</p> <p>1 year+6 months – Special School</p>
<b>Principal</b>	<p>National Teacher</p> <p>Bachelor of Social Science</p> <p>Graduate Diploma</p> <p>Diploma in Special Education</p> <p>Diploma in ICT</p>	<p>Mild General Learning Disabilities; Derbyshire Language Programme; On-line Applied Behaviour Analysis Course; On-line Course on Understanding Autism; Information and Communication Technology (ICT) for Pupils with Special Educational Needs; Involved in Compiling and Delivering ICT Continuing Professional Development for Teachers in Special Education.</p>	<p>4 weeks - Mainstream</p> <p>29 years - Special School</p> <p>3 years - Administrative Principal</p>
<b>Focus-Group Participant 1</b>	<p>Bachelor of Education</p>	<p>Treatment and Education of Autistic and related Communication handicapped CHildren (TEACCH); Applied Behaviour Analysis; Picture Exchange Communication System; Out of Sync-Child; Three Autism Seminars; Crisis Prevention Intervention Training; Behaviour.</p>	<p>5 weeks- Mainstream</p> <p>19 years - Special School</p>
<b>Focus-Group Participant 2</b>	<p>Masters in Primary School Teaching</p>	<p>Treatment and Education of Autistic and related Communication handicapped CHildren (TEACCH); Picture Exchange Communication System; On-line Applied Behaviour Analysis Course; On-line Course on Understanding Autism; Floor Time; First Aid Course.</p>	<p>3 years- Mainstream</p> <p>2 years - Special School</p> <p>Part-time music teacher for 5 years.</p>

### **Analysis of Findings within the Model Suggested by Guskey and Muijs et al.**

The findings are presented within the framework of the model suggested by Guskey (2000) and Muijs et al. (2004) as illustrated in Figure 6 and Table 7 previously. A summary of the quantitative ratings assigned to the video data and the record of inter-rater reliability are provided in Table 20 below. These ratings will be referred to throughout the analysis. Schools where teachers have completed the post-graduate certificate programme are shaded in light green, schools where teachers have not completed the programme are shaded in dark green and the two schools where teachers had completed a supervised practicum as part of the post-graduate programme have additional purple shading.

Findings related to The Antecedent Level are presented in this chapter. As previously referred to in the Methodology Chapter, the decision to include six schools where teachers had completed the post-graduate programme and four schools where teachers had not completed the programme was based on expediency and the time-frame for the research rather than a particular sampling logic or statistical formula. The selection of a greater number of schools where pupils had completed the programme may result in a greater number of data codes being recorded for these schools. While this should be taken into account in considering the research findings, the focus of the research is on interrogating data in order to engage in knowledge construction rather than enumeration and attending to the concept of trustworthiness in producing valid and reliable data in an ethical manner.

**Table 20 - Section A. Inter-Rater Agreement of Individual Items of Classroom Observation Schedules**

**Black Font: Researcher's Evaluation**

**Red Font: Independent Rater's Evaluation**

**Navy Font: Item Inter-Rater Agreement**

**1= never/almost never; 2=rarely; 3=sometimes; 4=often: 5=always or almost always**

**Understanding, Knowledge and Skills**

Pupils with autistic specific disorders are accommodated in relation to the physical layout, organisation and environmental stimuli of the classroom.

**1.1**

**Item Inter-Rater Agreement: 80%**

School A		School B		School C		School D		School E		School F		School G		School H		School I		School J	
5	5	5	4	5	5	5	5	5	5	5	5	3	2	5	5	5	5	5	5

Predictability, structure and routine are considered in the implementation of the curriculum.

**1.2**

**Item Inter-Rater Agreement: 100%**

School A		School B		School C		School D		School E		School F		School G		School H		School I		School J	
5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5

An awareness of the social deficits of the triad of impairments permeates learning and teaching activities.

**1.3**

**Item Inter-Rater Agreement: 60%**

School A		School B		School C		School D		School E		School F		School G		School H		School I		School J	
5	5	4	4	4	5	5	4	4	3	4	4	3	3	4	4	5	5	3	5

An awareness of the communication deficits of the triad of impairments permeates learning and teaching activities.

**1.4**

**Item Inter-Rater Agreement: 90%**

School A		School B		School C		School D		School E		School F		School G		School H		School I		School J	
5	5	4	4	5	5	5	5	5	5	4	4	4	4	4	4	5	5	5	4

An awareness of the deficit of the triad of impairments associated with rigidity of thought and behaviour permeates learning and teaching activities.

**1.5**

**Item Inter-Rater Agreement: 100%**

School A		School B		School C		School D		School E		School F		School G		School H		School I		School J	
5	5	3	3	5	5	5	5	5	5	4	4	4	4	5	5	5	5	5	5

A range of teaching approaches and strategies is used to meet the group and individual needs of pupils.

**1.6**

**Item Inter-Rater Agreement: 90%**

School A		School B		School C		School D		School E		School F		School G		School H		School I		School J	
5	5	2	2	5	5	5	5	5	5	5	5	4	4	5	4	5	5	5	5

**Table 20- Section B. Inter-Rater Agreement of Individual Items of Classroom Observation Schedules**

<b>Black Font: Researcher's Evaluation    Red Font: Independent Rater's Evaluation    Navy Font: Item Inter-Rater Agreement</b>																					
1= never/almost never; 2=rarely; 3=sometimes; 4=often: 5=always or almost always												Understanding, Knowledge and Skills continued									
Teaching approaches and strategies consider the visual learning modality of pupils with ASDs												<b>1.7</b>		Item Inter-Rater Agreement: 90%							
School A	School B	School C	School D	School E	School F	School G	School H	School I	School J	School A	School B	School C	School D	School E	School F	School G	School H	School I	School J		
5	5	4	3	5	5	5	5	5	5	5	5	4	4	5	5	5	5	5	5		
Pupils are provided with opportunities to engage in individual work and group work.												<b>1.8</b>		Item Inter-Rater Agreement: 100%							
School A	School B	School C	School D	School E	School F	School G	School H	School I	School J	School A	School B	School C	School D	School E	School F	School G	School H	School I	School J		
5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5		
Pupils are actively and meaningfully engaged in learning activities.												<b>1.9</b>		Item Inter-Rater Agreement: 80%							
School A	School B	School C	School D	School E	School F	School G	School H	School I	School J	School A	School B	School C	School D	School E	School F	School G	School H	School I	School J		
5	5	3	3	5	5	5	5	5	5	4	3	3	2	5	5	5	5	5	5		
Independent learning is promoted.												<b>1.10</b>		Item Inter-Rater Agreement: 90%							
School A	School B	School C	School D	School E	School F	School G	School H	School I	School J	School A	School B	School C	School D	School E	School F	School G	School H	School I	School J		
5	5	3	3	5	5	5	5	5	5	4	3	3	3	5	5	5	5	5	5		
Strategies for the management of pupil s' behaviour consider the implications of the triad of impairments.												<b>1.11</b>		Item Inter-Rater Agreement: 100%							
School A	School B	School C	School D	School E	School F	School G	School H	School I	School J	School A	School B	School C	School D	School E	School F	School G	School H	School I	School J		
5	5	3	3	5	5	5	5	5	5	4	4	3	3	5	5	5	5	5	5		
Strategies for the management of pupils' behaviour consider the implications of the sensory and perceptual sensitivities of pupils.												<b>1.12</b>		Item Inter-Rater Agreement: 100%							
School A	School B	School C	School D	School E	School F	School G	School H	School I	School J	School A	School B	School C	School D	School E	School F	School G	School H	School I	School J		
5	5	4	4	5	5	5	5	5	5	3	3	3	3	5	5	5	5	5	5		
Strategies for the management of pupil s' behaviour consider the implications of the poor organisational skills of pupils.												<b>1.13</b>		Item Inter-Rater Agreement: 90%							
School A	School B	School C	School D	School E	School F	School G	School H	School I	School J	School A	School B	School C	School D	School E	School F	School G	School H	School I	School J		
5	5	5	5	5	5	5	5	5	5	5	5	3	3	5	5	5	5	5	5		

**Table 20- Section C. Inter-Rater Agreement of Individual Items of Classroom Observation Schedules**

<b>Black Font: Researcher's Evaluation    Red Font: Independent Rater's Evaluation    Navy Font: Item Inter-Rater Agreement</b>																			
<b>1= never/almost never; 2=rarely; 3=sometimes; 4=often: 5=always or almost always</b>												<b>Understanding, Knowledge and Skills continued</b>							
<b>Strategies for the management of pupil s' behaviour consider the visual learning modality of pupils.</b>												<b>1.14</b>		<i>Item Inter-Rater Agreement: 90%</i>					
School A		School B		School C		School D		School E		School F		School G		School H		School I		School J	
5	5	4	3	5	5	5	5	5	5	5	5	4	4	5	5	5	5	5	5
<b>Pupils' behaviour in effectively managed.</b>												<b>1.15</b>		<i>Item Inter-Rater Agreement: 100%</i>					
School A		School B		School C		School D		School E		School F		School G		School H		School I		School J	
5	5	3	3	5	5	5	5	5	5	4	4	3	3	5	5	5	5	5	5
<b>A wide range of appropriate learning and teaching resources including Information and Communication Technology is available and is used appropriately.</b>												<b>1.16</b>		<i>Item Inter-Rater Agreement: 100%</i>					
School A		School B		School C		School D		School E		School F		School G		School H		School I		School J	
5	5	3	3	5	5	5	5	5	5	4	4	3	3	5	5	5	5	5	5
<b>Special Needs Assistant support is effectively managed.</b>												<b>1.17</b>		<i>Item Inter-Rater Agreement: 90%</i>					
School A		School B		School C		School D		School E		School F		School G		School H		School I		School J	
5	5	2	1	5	5	5	5	5	5	5	5	2	2	5	5	5	5	5	5

**Table 20- Section D. Inter-Rater Agreement of Individual Items of Classroom Observation Schedules**

**Black Font: Researcher's Evaluation    Red Font: Independent Rater's Evaluation    Navy Font: Item Inter-Rater Agreement**

1= never/almost never; 2=rarely; 3=sometimes; 4=often; 5=always or almost always

**Curriculum**

Pupils with ASD have access to the primary school curriculum.														<b>2.1</b>		<b>Item Inter-Rater Agreement: 100%</b>			
School A		School B		School C		School D		School E		School F		School G		School H		School I		School J	
5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
The teacher displays a secure knowledge and understanding of curriculum content.														<b>2.2</b>		<b>Item Inter-Rater Agreement: 100%</b>			
School A		School B		School C		School D		School E		School F		School G		School H		School I		School J	
5	5	3	3	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
The curriculum content is matched to pupils' learning needs and capacities.														<b>2.3</b>		<b>Item Inter-Rater Agreement: 80%</b>			
School A		School B		School C		School D		School E		School F		School G		School H		School I		School J	
5	5	3	2	5	5	5	5	5	5	4	4	3	2	5	5	5	5	5	5
The curriculum provides a range of opportunities to develop communication skills.														<b>2.4</b>		<b>Item Inter-Rater Agreement: 70%</b>			
School A		School B		School C		School D		School E		School F		School G		School H		School I		School J	
5	5	4	4	5	5	5	4	5	5	4	4	4	4	4	5	5	5	5	4
The curriculum provides a range of opportunities to develop social skills.														<b>2.5</b>		<b>Item Inter-Rater Agreement: 70%</b>			
School A		School B		School C		School D		School E		School F		School G		School H		School I		School J	
5	5	4	4	4	5	5	4	4	4	4	4	3	3	4	5	5	5	3	3
The curriculum provides a range of opportunities to develop play and imaginative skills.														<b>2.6</b>		<b>Item Inter-Rater Agreement: 90%</b>			
School A		School B		School C		School D		School E		School F		School G		School H		School I		School J	
5	5	4	4	5	5	5	5	5	4	5	5	4	4	5	5	5	5	4	4
The interests of pupils are linked appropriately to curriculum content.														<b>2.7</b>		<b>Item Inter-Rater Agreement: 90%</b>			
School A		School B		School C		School D		School E		School F		School G		School H		School I		School J	
5	5	3	3	5	5	5	5	5	5	4	4	3	2	5	5	5	5	5	5

Lindsay, 2007). The six teachers who had completed the post-graduate certificate programme referred to being motivated by an interest in ASDs and described it in terms of being hooked, attracted by something new, paving the way, involvement in innovation and being very lucky. The emotive level of the interest is captured in statements such as *“it wasn't really a head decision”*, *“I love here, I love the whole area of autism, I find it absolutely fascinating and you know how they think and how they work”* and *“I stayed because I wanted to stay in the field, I was hooked”*. Two teachers cited altruistic reasons as working on behalf of the person who was struggling and helping children so that they might have a life. One teacher referred to being motivated by children's progress and stated that *“the one thing I do that gives me a bit of a kick is seeing what children have done, you know, when you get to the end of it”*. Similar motivational factors were recorded for those teachers who had not completed the programme related to an interest in special education and an interest in the area of ASDs. Teachers' motivation is evident in phrases such as *“I love doing my assessments and figuring it out and going okay what is next”*, *“I often think I can't wait to see how different it will be in five years time”*, *“It really just captured my imagination”* and *“I love my job”*. There were no discernible features, which distinguished the motivation of those teachers who had completed the programme from those who had not. All teachers described motivational factors in emotive language and articulated a keen interest in and commitment to the education of pupils with ASDs. The fact that the six teachers who had completed the programme voluntarily agreed to participate in the research and the four teachers who had not completed the programme readily agreed to participate when personally contacted may indicate that the motivation of all research participants was particularly high and may not therefore be deemed to be a representative sample of teachers of pupils with ASDs. This has further repercussions for the interpretation of the findings of the research as the high levels of motivation may be a factor peculiar to these research participants and may be an important determinant and predictor of teaching practices.

Linked to teachers' motivation and beliefs were aspects of teachers' personal life experiences. The life experiences of two teachers who had completed the post-graduate certificate programme were identified as motivating factors by the teachers, one teacher had a child with special educational needs and another teacher's friend

had a child with ASDs. The life experiences of all teachers who had not completed the programme were referred to as exerting an influence on their motivation. Each teacher identified a person who had exerted some influence on them and these included a curriculum co-ordinator and a principal while in a prior teaching position, the teacher's mother who was also a teacher of pupils with special educational needs and a friend's mother who was a former schools' inspector. One teacher referred to an early childhood experience of visiting a residential institution as impacting on her and stated that:

*"I suppose it goes back... my first instance is years before that when we used to go visit a residential place for my church once a month. In those days that was the visiting. Isn't that terrible once a month. One afternoon visiting. We would go and I was fascinated and I was fascinated why these people were in there, you know, it seemed so unjust, it seemed they were normal people. But in those days people were just put into residential homes".*

One teacher during the focus group interviews described how sharing a house with a child with AS and being involved with his care and upkeep contributed to his understanding of ASDs. Measor (1985) identifies critical intrinsic incidents in teachers' biographies, which provoke the individual into selecting particular kinds of actions and lead them in specific directions. Hargreaves (1998) maintains that teachers' backgrounds and biographies are among a number of elements, which impact on the manner in which they approach their work. These findings suggest that personal biographies can exert an influence on teachers' decisions to teach pupils' with ASDs. The impact of personal biographies on the four teachers who had not completed the post-graduate programme may also be a factor, which contributed to the high motivation levels of these teachers.

Five of the six teachers who had completed the post-graduate certificate programme referred to being apprehensive, worried and anxious at the initial establishment of the class. Statements such as *"I was really scared, very scared because I had no information on autism"*, *"I literally walked into an empty room with two very disabled children"*, *"I remember myself saying where do I start with these pupils"*,



*“the biggest problem, Emer, when I started is that nobody ever helped me”* and *“today it galls me that I was under so much pressure for the first two years”*. The sixth teacher had considerable prior teaching experience with pupils with ASDs and didn’t express such anxiety. Three of the six teachers had no previous experience of teaching pupils with ASDs and were in mainstream schools where provision was being established for the first time. One teacher had experience of teaching pupils with ASDs but was now teaching in a mainstream school where provision was being established for the first time. The fifth teacher was teaching in a special school where a class for pupils with ASDs had recently been established. Interestingly only one of the teachers who had not completed the programme referred to being apprehensive at the initial establishment of the class. This teacher was in a special school and had no prior experience of teaching pupils with special educational needs while the other three teachers had considerable prior experience and were in special schools where provision had been in place for a considerable period of time. The teacher advocated that it would help if some initial CPD was available to all teachers who began teaching in classes for pupils with ASDs. The apprehension levels experienced by five of the teachers who completed the programme may be a factor, which was instrumental in teachers choosing to access the CPD programme as similar apprehension levels were not recorded for three of the teachers who had not completed the programme. It appears from an analysis of the data that teachers’ previous teaching experiences and the prior experience of the school in meeting the needs of the pupils with ASDs are factors, which affect the apprehension levels of teachers at the initial establishment of provision.

The experiences of the five teachers who had completed the post-graduate certificate programme and the one teacher who had not completed the programme confirm the findings of the literature review related to the criticality of teachers accessing CPD to enable them to meet the needs of pupils with ASDs (Crimmins et al., 2001; DES, 2001; National Research Council, 2001a; Wienke et al., 2005). Those teachers who did not experience apprehension at the establishment of the class were in schools that had prior experience of providing for pupils with ASDs and/or had previous experience of teaching pupils with ASDs. A review of current literature and the views of 261 participants, including 173 parents and eighty-eight professionals in

England endorsed the view that staff working with individuals with ASDs should have relevant ASD-specific knowledge and understanding (Jones et al., 2008). The findings of this research suggest that CPD opportunities should be available to teachers from when they begin to teach in classes for pupils with ASDs. This would limit the potential for teachers to experience apprehension at the establishment of a class and eliminate the identified reliance on individual teachers' previous experiences or the prior experience of the school. This finding can be linked to research indicating that teachers' career experiences can be delineated in five broad phases comprising launching a career, stabilisation, new challenges, reaching a professional plateau and a contraction of professional activity and interest (Huberman, 1989; 1995). Beginning to teach pupils with ASDs may potentially reposition teachers at the launching phase of their career where the present research suggests that they experience reality-shock in confronting the complexity and simultaneity of instructional management and experience self-doubt related to their ability to teach. The co-existence of the concepts of survival and discovery described by Huberman are clearly identifiable in the research data and I concur with Huberman that the latter concept assists the teacher in tolerating the former one. The availability of CPD for teachers at this stage has the potential to ensure that the experience of discovery transcends that of struggling to survive for the teacher and may contribute to the mitigation of teacher-attrition in classes for pupils with ASDs. A formalised CPD programme was not available for the teachers who participated in the research study prior to them taking up a position in ASD-specific provision. However from 2007, the DES has provided CPD for teachers prior to them taking up a position in a class for pupils with ASDs through the SESS and teachers can avail of further CPD while continuing to teach in the class (Hanafin, 2008; SESS, 2009a). Teachers can also avail of ASD-specific post-graduate programmes in St. Patrick's College, Drumcondra, Dublin and St. Angela's College, Sligo (DES, 2009b; 2009c). Successful completion of these post-graduate programmes attracts European Credit Transfers and, participants can progress to Master or Doctoral Degrees in ASDs or Special Education. When first appointed to a primary or a special school, a newly qualified teacher is placed on probation, and on successful completion of this process is awarded the diploma in teaching by the DES (DES, 2000b; 2005e; 2006d). The circulars related to the post-graduate programmes state that primary teachers and

teachers in special schools should have satisfactorily completed their probationary period (DES, 2009b; 2009c). Clarification in respect of this proviso was sought from a department official who stated that the intent of the circular was to prioritise places for teachers who had been successfully probated but that the wording of the circular allowed for exceptions to be made in situations where a teacher expressly requested placement on a programme for valid professional reasons related to his/her particular school context (DES, 2009e). The probationary requirement may have impacted on the fact that two of the four teachers who had not completed the programme were in their probationary year and were therefore not automatically entitled to apply for a place on the programme. However neither teacher articulated during interviewing that they would have applied for a place on the programme if they were automatically entitled to do so.

### *Prior Professional Experiences*

Table 22 demonstrates the nature and frequency of the selective coding of data related to the prior professional experiences of teachers who had completed the post-graduate certificate programme and those who had not completed the programme.

<b>Table 22. Nature and Frequency of Selective Data Codes related to Teachers' Prior Professional Experiences</b>	
<b>Teachers who had Completed the Post-Graduate Certificate Programme</b>	<b>Teachers who had not Completed the Post-Graduate Certificate Programme</b>
<b>Participants' Prior Professional Experiences (6)</b>	<b>Participants' Prior Professional Experiences (5)</b>
Contribution of Initial Teacher Education to Teachers' Knowledge Base (42)	Contribution of Initial Teacher Education to Teachers' Knowledge Base (10)
Role of Experience in Initial Teacher Education in Applying for Post to Teach Pupils with Autistic Spectrum Disorders (4)	Role of Experience in Initial Teacher Education in Applying for Post to Teach Pupils with Autistic Spectrum Disorders (2)
Inadequacy of Special Education Input in Initial Teacher Education (10)	Inadequacy of Special Education Input in Initial Teacher Education (9)
Prior Experiences Teaching Pupils with Special Educational Needs (5)	Prior Experiences Teaching Pupils with Special Educational Needs (11)
Prior Experiences Teaching Junior Classes (1)	Prior Experiences Teaching Pupils with Autistic Spectrum Disorders (18)
Prior Experience Working in a Disadvantaged Setting (1)	

### ***Initial Teacher Education – Conceptual Content***

As the literature review suggested, there was little input in ITE on special education, however the role of ITE emerged as a dynamic element in a continuum comprising quality initial training, well-managed structured induction and in-career training programmes (Ireland, 1995; Burke, 2000; Florian, 2008). All teachers, principals and focus group participants affirmed the impact of ITE in contributing to teachers' knowledge base. Table 23 illustrates the variety of areas of ITE, which individual class teachers referred to as impacting on their ability to meet the needs of pupils with ASDs. It is significant that during the interview process, considerable probing was required in order to elicit responses in this area from all teachers. This relates to the additional emerging finding on teacher articulation, which is discussed in Chapter Nine.

Three of the teachers who had completed the post-graduate certificate programme and two teachers who had not completed the programme referred to the role of ITE in highlighting the positive relationship between pupil motivation and optimising learning. The related concepts of having respect for the pupil and ensuring pupils were happy were referred to by two of the teachers who had completed the programme. This can be linked to the theory of the hierarchy of need, which considers that needs related to physiology, safety, love and a sense of belonging, esteem and self-actualisation must be satisfied in order for learning to be effective (Maslow, 1962). The concept is captured by the teacher who stated that *"...it is not that I want them to be roaming around happy all day but I want to be sure that they are happy, because I think it is important for them. And because they won't have forgotten anything"*. Similarly another teacher stated that *"...so I try things I think the child will love. And if he doesn't like it, I will scrap it and move on, because the importance is the engagement that he is going to enjoy his learning"*. Edelman Watkins (2005) points out that learning is more likely to occur where the teacher proactively and purposefully creates an empowering, motivating and success-oriented environment based on mutual respect and where socially responsible classroom behaviour is encouraged. Lewi-Dumont (2009) also suggests that affective engagement presents as a strong motivator for learning and should not be discounted.

**Table 23. Areas of Impact of Initial Teacher Education on Teachers' Practice**

<b>Teacher</b>	<b>Area of Impact of Initial Teacher Education</b>
<b>School A</b>	Froebel Approach; Implementing an Individualised Pupil-Centred Approach to Learning and Teaching; Curriculum; The Value of Including Play in Pupils' Programmes; Child Development; Teacher-Observation Skills and Directing Attention to Pupils' Motivation.
<b>School B</b>	Montessori Approach; Implementing an Individualised Pupil-Centred Approach to Learning and Teaching and Ensuring Respect for each Pupil.
<b>School C</b>	Range of Methodologies; Curriculum; Implementing an Individualised Pupil-Centred Approach to Learning and Teaching; Teacher Observation; Positive Reinforcement and Directing Attention to Pupils' Motivation.
<b>School D</b>	Observation and Placement Opportunities; Specific Input on Special Education including Autistic Spectrum Disorders and Ensuring Pupils are Happy.
<b>School E</b>	Curriculum; Classroom Organisation; The Value of Story; Directing Attention to Pupils' Motivation; Experiential and Discovery Learning;
<b>School F</b>	Curriculum; Literacy; Activity Learning.
<b>School G</b>	Curriculum; Child Development; Implementing an Individualised Pupil-Centred Approach.
<b>School H</b>	Infant Education; Curriculum; Information and Communication Technology; Implementing an Individualised Pupil-Centred Approach; Observation and Placement Opportunities and Directing Attention to Pupils' Motivation.
<b>School I</b>	Knowledge of a Range of Teaching Methodologies.
<b>School J</b>	Directing Attention to Pupils' Motivation; Implementing an Individualised Pupil-Centred Approach; Curriculum; Management of Special Needs Assistant Support; Literacy and Differentiated Instruction.

The role of ITE in implementing an individualised pupil-centred approach was referred to by three teachers who had completed the post-graduate certificate programme and three who had not. Teachers referred to "...trying to build from where the child is at and where they are coming from", "...a respect for the child and individuality", and "now one child would have been fourteen and just getting the hang of basic reading. So we started doing emergency words and food words with pictures and that was what his learning was. My higher level student would have been on novels and we would have been teaching him how to do paragraphs or give him four sentences and give him one question and trying to find the answer". This can be related to the developmental and process approach described by Vygotsy (1978), which focuses on the importance of the teacher varying the levels of

mediation in response to the individual pupil in order to optimise pupils' learning. Teachers' knowledge and understanding of a pupil-centred approach may have a potentially beneficial impact on the development of the associated requisite skills of addressing individual pedagogic needs for pupils with special educational needs as referred to by Lewis and Norwich (2005). The principles of Froebel and Montessori teacher-training were stated to be relevant to meeting the needs of pupils with ASDs. One teacher remarked that *"I really do believe Montessori training, the principles and the way it is left to right all of the basics fit so well with special needs"* and another teacher noted that *"well I was trained within Froebel and I think that the child-centred approach would have crossed over"*. Teachers also affirmed that ITE provided them with a knowledge of a range of teaching methodologies and specifically referred to play, activity learning, infant education, literacy, differentiated instruction strategies and experiential learning. Statements such as *"I think the only thing I was any good at in the beginning was interacting with the children at their level. I could play with them"*, *"what started me on it was stories, now I knew they wouldn't listen to a story being read out so I drew pictures and moved them around. I had a puppet as well and they started listening to them and then they said, "Kate tell us a story"*, *"...for nature study we are going to the Botanic Gardens on Wednesday. Now the ABA people, some of them, freaked at going to the Botanic Gardens, but how are they going to know about the squirrel. They are not going to say it, they need to see him"*, and *"you need those skills for differentiated learning, you need more than one strategy to teach reading. You need more than one strategy to teach writing"*. This suggests that teaching pupils with ASDs is concerned with combining common pedagogic skills with group pedagogic skills while taking cognisance of the pedagogic needs that are unique to individual learners (Norwich and Lewis, 2005).

One teacher who had completed the post-graduate certificate programme and one teacher who had not completed the programme referred to the importance of the knowledge of child development acquired during ITE. It has been suggested that understanding the needs of pupils with special educational needs begins with knowing the normative developmental changes that occur in children's cognitive, physical, emotional and social development (Edelman Watkins, 2005). One teacher

recounted a personal experience of accessing CPD with a range of participants who were not teachers and remarked that a knowledge of the child's developmental level was crucial to implementing effective learning and teaching. She described her experience of a course participant engaging with a child with ASD who had not established object permanence in terms of:

*"Somebody who was trying to interact with a child, actually the person was using way too much language but the child just dropped a toy and didn't even know, like the person said "where's the car now where's the car", and the child was looking at them I mean what car, there was no car there at that stage and I said to the person, I didn't want to be like a know it all but I said "you know he is probably not at that stage yet. That the car is gone and it would be better to bring the car back because he doesn't know that there was a car there, that it's gone" and she was offended by it. I know that naturally, it goes way back to years ago when I learnt that, it's part of my training, you can understand and you can see where you are going wrong. They keep bashing away in the wrong direction".*

This is commensurate with the views of Edelman Watkins, who advises that familiarity with developmental trends facilitates the assessment of pupils' strengths and weaknesses and enables the teacher to provide appropriate learning and teaching opportunities for each pupil.

Five of the six teachers who had completed the post-graduate certificate programme, three of the four teachers who had not completed the programme, the ten principals, and the focus group participants considered the input on special education in ITE to be inadequate and deficient. Of the two teachers who were satisfied with the input in ITE, one had completed a specific special education ITE programme abroad and the other had completed a programme in Ireland almost thirty-four years previously, which contained a practicum with pupils with special educational needs and substantial theoretical input. A principal in one of the six schools where teachers had completed the programme observed that issues related to team management, imparting knowledge to other staff members from CPD programmes, the management of SNA-support and fostering relationships with parents were not

previously a part of ITE. One focus group participant observed that *“there are going to be special needs children in every class in every school from now on so there probably needs to be a much bigger emphasis on this in the training college”*. The potential of teachers doubting their existing knowledge and expertise when initially teaching pupils with ASDs was referred to by one focus group participant who was also teaching a class for pupils with ASDs *“it put me right back to where I had been and how effective my training would be and I would say for the first month I doubted coming into work at all saying can I do this, have I anything to offer these children”*. A post-primary trained teacher stated that *“it was a post-primary degree and it was history and religion and special education was never mentioned”*. This is commensurate with the experience described by Balfe (2001) when she refers to her first year of teaching in a class for pupils with ASDs in a mainstream school as evoking feelings of isolation, anxiety, ignorance and frustration. At this point, Balfe had been a mainstream teacher for nineteen years.

The literature review identified the pressures on ITE that have emerged from the need to respond to globalisation, demographic changes, interculturalism, threats to social and family cohesion, the inclusion of pupils with special educational needs and the influence of destructive sub-cultures (Coolahan, 2007; Loughrey, 2007). It is acknowledged that ITE cannot be expected to provide teachers with the complete pre-requisite knowledge, understanding and skills to meet the learning and teaching needs of pupils with ASDs. The findings suggest that the impact of ITE on teachers’ knowledge, understanding and skills in teaching pupils with ASDs should not be underestimated. However the research has identified a need to provide input in CPD programmes that affirms the effectiveness of teachers’ existing knowledge, understanding and skills in meeting the needs of pupils with ASDs.

### ***Initial Teacher Education – Curriculum Knowledge***

The knowledge of curriculum accessed during ITE was affirmed by four teachers who had completed the post-graduate certificate programme and three teachers who had not completed the programme. This finding is corroborated to some extent by the classroom observation recording of one hundred percent inter-rater agreement in relation to pupils having access to the Primary School Curriculum and teachers’ secure knowledge and understanding of curriculum content. The Primary School



Curriculum also formed the basis of curriculum access for post-primary aged pupils. Eighty percent inter-rater agreement was recorded for teachers matching the curriculum to pupils' learning needs and capacities. The Primary School Curriculum is designed to celebrate the uniqueness of each child, as it is expressed in each child's personality, intelligence and potential for development (NCCA, 2009a). It is designed to nurture each child's spiritual, moral, cognitive, emotional, imaginative, aesthetic, social and physical dimensions of development (NCCA, 1999). The Primary School Curriculum was launched in 1999 and builds on and incorporates the child-centred principles of the previous 1971 curriculum in addition to current educational thinking and innovative and effective pedagogical practice (NCCA). Three key aims of primary education related to enabling the child to live a full life as a child and realise his/her potential as a unique individual, enabling the child to develop as a social being and preparing the child for further education and lifelong learning are identified (NCCA). The Primary School Curriculum is presented in six areas comprising eleven subjects as detailed in Table 24 below.

<b>Table 24. Primary School Curriculum</b>	
<b>Areas</b>	<b>Subjects</b>
<b>Language</b>	English Irish
<b>Mathematics</b>	
<b>Social, Environmental and Scientific Education</b>	History Geography Science
<b>Arts Education</b>	Visual Arts Music Drama
<b>Physical Education</b>	
<b>Social, Personal and Health Education</b>	

Samples of the classroom displays photographed during the classroom observation period in Figure 8 below and activities that pupils were engaged in indicated that all teachers linked pupils' learning and teaching to areas of the Primary School Curriculum. In School A, a visual arts activity for pre-school pupils was designed to

allow pupils to experiment with paint and respond to their own and their peers' work. The six strands of drawing, paint and colour, print, clay, construction and fabric and fibre provide for the development of pupils' expressive abilities in the Visual Arts Curriculum (NCCA, 2009b). The pupils' experience, imagination and observations are emphasised as the starting points for activities. Pupils are also encouraged to look at and respond to their own work, their peers' work and the work of a variety of artists. A music activity in School C for pupils with severe to profound general learning disabilities and ASDs was aimed at developing pupils' skills in recognising and selecting percussion instruments of their choice followed by performance and composition. The Music Curriculum introduces pupils to music reading and writing, song singing and playing instruments and is based on the three strands of listening and responding, performing and composing (NCCA, 2009c). In School D, pupils in a senior class in a mainstream school were encouraged to use equipment to control and manage body movements. Pupils access learning opportunities through the medium of movement in the athletic, dance, gymnastic, games, outdoor and adventure activity and aquatic strands of the PE curriculum (NCCA, 2009d). The gymnastic strand focuses on body actions such as jumping, turning, swinging and balancing and is concerned with the control and management of body movements. The food pyramid display in School D provides a visual reminder for pupils of the importance of making healthy food choices and ensuring they direct attention to a balanced diet. Social, Personal and Health Education is designed to foster pupils' personal development, health and well-being and to help him/her to create and maintain supportive relationships and become an active and responsible citizen in society (NCCA, 2009e). The curriculum is divided into three strands related to myself, myself and others and myself and the wider world. In School G, a curriculum display in a class for pupils with moderate general learning disabilities and ASDs was used to develop an understanding of underwater habitats. Social, Environmental and Scientific Education (SESE) refers to the subject areas of History, Geography and Science (NCCA, 2009f). The SESE Curriculum provides opportunities for pupils to explore, investigate and develop an understanding of the natural, human, social and cultural dimensions of local and wider environments.

The national programme of compulsory in-service in the Primary School Curriculum was delivered by the PCSP in eleven subject areas from the 1999-2000 to the 2006-2007 school year (McAuliffe, 2010). While this study did not collect data in relation to the specific components accessed by individual teachers, it is suggested that teachers' knowledge of curriculum from ITE was potentially augmented by this programme based on the premise that all schools had accessed the programme. The impact of the national in-service programme on teachers' knowledge may be of particular significance in view of the fact that six teachers had teaching experiences ranging from twenty to thirty three years and did not therefore receive ITE in the Primary School Curriculum. Of the three teachers who had teaching experiences ranging from two to four and a half years, one had completed her ITE in the UK, one had completed a post-primary initial teaching qualification and the final teacher referred to the lack of input in Montessori ITE on the Primary School Curriculum.

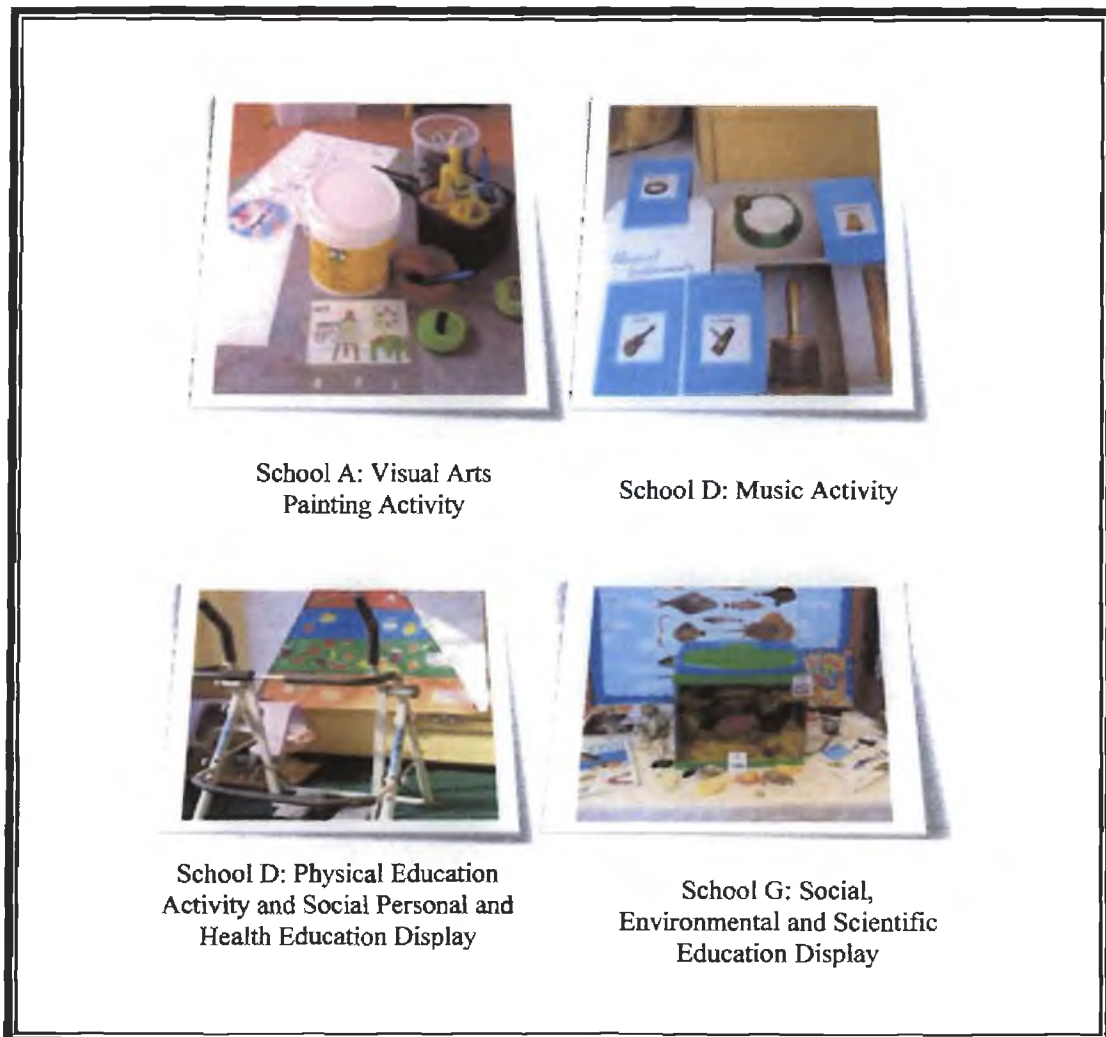


Figure 8. Curriculum-Linked Classroom Displays and Activities

Pupils' curriculum access is further discussed at Level Two below. It is to be noted that as curriculum planning was not examined and classroom observation was linked to periods of twenty-four to fifty-four minutes, the breadth, balance and continuity of pupils' curriculum access and associated progress cannot be assessed.

### ***Initial Teacher Education – Potential to Stimulate Interest in Autistic Spectrum Disorders***

The potential of ITE in stimulating teachers' interest in the education of pupils with ASDs was evident. One teacher who had completed the post-graduate certificate programme considered a six-week teaching practicum in her final year in a school for pupils with ASDs as the reason for applying for a post teaching pupils with ASDs. Two teachers who had not completed the programme cited experiences of teaching pupils with special educational needs during ITE as stimulating their interest in special education. All teachers considered an initial teaching qualification to be an essential prerequisite for teaching pupils with ASDs. Statements such as *“my primary role as a primary school teacher is to deliver the curriculum. To me the essence of that is teaching the children to read and write and be able to cope with society like other adults. So how in God's name would I impart those skills if I hadn't my basic teaching skills in training college”*, *“we find more and more that we are leaning towards the ideas in the mainstream curriculum. We go about it in a different way but that is the beauty of teaching, the time you lose your creativity forget about it then”*, *“I think they are the skills that come from good practical teaching, logical, almost common sense...say going back to good teaching practice, let's say, good pedagogy skills, reading the situation correctly”*, *“an ability to see where the child was at”* and *“I suppose it comes from me discovering my way as opposed to there being a prescribed way”*. While all principals affirmed the value of an initial teaching qualification, they also acknowledged the criticality of obtaining additional qualifications in the area. One principal remarked that:

*“You take the professionalism of teaching, and I come back to this in all the courses I do. Is teaching an art or a science? It's not a science that you can say this, and this and this is the methodology that I use and this result comes out. There is an uncertainty about any professional. You have to be ready to make considered*

*judgements and give opinions and look at all aspects of it and discuss with colleagues and stand by what you are doing”.*

### ***Prior Professional Experiences***

The prior professional experiences of all teachers impacted on their decision to apply for a post teaching pupils with ASDs. Three of the teachers who had completed the post-graduate certificate programme and all four teachers who had not completed the programme had been involved in the area of special education and were interested in becoming further involved in the area. One teacher who had completed the programme considered her previous experience working with disadvantaged pupils as a precursor to her involvement in the area of special education commenting that *“so I suppose I would have had gradually been getting into the whole area of special needs without putting that label on it”*. One teacher who had completed the programme had previously been involved in the area of special education but stated that *“it wasn’t a particular choice that I was going for autism and autism only, it was just the fact that it was the way it fell”*. This teacher added that *“I don’t think I would fancy going into a primary school very much. I prefer special needs”*. One teacher who had completed the programme considered that her experience of teaching the junior classes developed key skills that she used in teaching pupils with ASDs and while having no experience of special education, she felt instinctively that she wanted to teach pupils with ASDs. The role of experience in contributing to teachers’ professional development was evident in the observations of the two teachers who had not completed the post-graduate programme and were on their probationary year. One teacher described how she successfully communicated with a pupil through using a writing process *“I just tried it one day, I knew he wasn’t going to answer me because when I asked him, he kept telling me I am fine, I am fine, I am fine, but he obviously wasn’t fine and I just thought I would write it and I wrote down how do you feel and he wrote back, I feel angry. You know angry about what and he was able to deal with it that way then”*. This teacher had not accessed CPD on social stories or comic strip conversations at this point but observed that *“I was doing well this time last year but I have come on so much like. An awful lot of it is a lot of research myself and trial and error, seeing what works with them and what doesn’t work. I have tried lots of things”*. The other teacher referred to the importance of

using a measured tone of voice and reducing language, which she described as “*draw back your language, before you say anything, say the sentence in your head and see if you can reduce it, the language involved and just leave, gap, gap, gap, gap between saying*”. Day and Sachs (2004) point out that the prior professional experiences of teachers have been identified as factors, which affect teachers’ approach to their work. While the precise effects of these experiences cannot be identified, their impact on teachers’ practice cannot be underestimated (Day and Sachs, 2004).

### ***Attitudes to New Professional Challenges***

Teachers who had completed the post-graduate certificate programme and those who had not demonstrated similar attitudes to new professional challenges as illustrated in Table 25 below. These attitudes were underpinned to varying degrees by a tendency to engage in self-questioning and in activities similar to what Levi-Strauss (1966) refers to as the occupation of the bricoleur.

<b>Table 25. Nature and Frequency of Selective Data Codes related to Teachers’ Attitudes to New Professional Challenges</b>	
<b>Teachers who had Completed the Post-Graduate Certificate Programme</b>	<b>Teachers who had not Completed the Post-Graduate Certificate Programme</b>
<b>Attitudes to New Professional Challenges (3)</b>	<b>Attitudes to New Professional Challenges (4)</b>
Participants’ Attitudes to New Professional Challenges (30)	Participants’ Attitudes to New Professional Challenges (37)
Practitioner Reflection (19)	Practitioner Reflection (18)
Bricoleur (11)	Bricoleur (6)
	Additional Time Required (13)

Van Manen (1990) suggests that a critical reflective approach to teaching in the form of self-assessment, questioning and doubting comprise the essence of pedagogy. All ten teachers demonstrated a propensity to engage in self-questioning in relation to their practice and articulated a concern to ensure that pupils were benefitting from the education being provided. One teacher who had completed the post-graduate certificate programme captured the essence of this propensity and stated that “*I would never think that I know it all, you can never do*”, while a teacher who had not

completed the programme stated that *“the more you know the more you need to know kind of thing”*. Self-questioning related to the implementation of strategies in the management of behaviour, curriculum access, ASD-specific methodologies, pupils’ achievement, parental involvement and individual education plans. The professional reflection evident in teachers’ practice is encapsulated in the words of a teacher who stated that *“because the way I look at it is if one method worked then the field of special education would never have started”*. One teacher who had not completed the post-graduate programme described the reflective practice engaged in by her and the SNAs in order to determine the cause of a pupil’s behaviour:

*“There was one boy now coming into the class there for weeks, about four or five weeks and two or three days a week, he was in really bad form and he was throwing awful tantrums. After a while we realised that the morning he was throwing tantrums he was complaining of feeling travel sick on the bus. So...but he only complained of it every two or three days. He wasn’t getting sick every day, it was just the odd few days he was getting sick and when he was sick he would throw a tantrum about something later on in the day. About four weeks later we finally figured out he wasn’t getting sick from travelling but that the bus driver was driving so fast and he was passing out cars and that when he was passing out three or four cars in a row that the child in my class, it would make him sick in his stomach. He never spoke, he was non-verbal until he was eight and he was in a car crash when he was eight and he spoke in broken sentences after the car crash. That was four and a half years ago. So he has this bit of a thing about car accidents and road deaths and road safety and that bus driver he is actually being let go from his taxi driving job since because of speeding. It took it this long to figure out that this was what was wrong with him. The bus driver was driving too fast for him and he was coming in bad form and he was throwing a tantrum and we had to look at everything else. We thought is it us, is it something in the classroom, was it you know? Whereas another child would just come and say straight out, you know, what happened. That was affecting everything, his work and his behaviour and it affected everything for weeks until we figured out, we finally figured out what was wrong with him. We were able to do something about it then”*.

This is indicative of the problem-solving and reflective practice engaged in by the majority of teachers in the research to determine the cause of pupils' behaviour and optimise pupils' opportunities to engage in the learning and teaching process. Dewey (1938) describes this as experiential learning where an ambiguous situation presents a dilemma for the individual, which he/she locates, defines and analyses in order to find a solution. Schön (1987) refers to this as a rigorous artistry characterised by reflection-in-action that competent professionals exercise in the indeterminate zones of practice. It is not possible to establish whether teachers adopted this reflective approach prior to teaching pupils with ASDs or whether the counter-intuitive thinking necessary for teaching these pupils prompts teachers to engage in reflective practice. Bolam and McMahon (2004) suggest that adopting the role of reflective practitioner enables the development of a deeper understanding of the learning process and the possibilities for further development.

The ten teachers all showed initiative related to researching the area of special education and ASDs in a manner akin to the bricoleur. One teacher who had not completed the post-graduate certificate programme described the essence of the bricoleur:

*"My holidays are going to book shops. There is one in the town, in the small market town that I come from originally in the Lake District. I have to travel seventy odd miles to go there, they have a fantastic book shop and I could spend all day in this book shop. All of my kids could. But unfortunately we usually have the dogs waiting outside. It's the only place I know that they have a wonderful selection of special education books and there I look and I think that is a good idea. I devour the books, just like yourself, and I look for ideas and I think that is a great one or I don't know if I want to spend a load of money, but I look for ideas. That's... I just think about it".*

All of the teachers referred to engaging in self-directed reading prior to engaging in formal CPD. They described combining this knowledge with their existing knowledge base in beginning to meet the learning and teaching needs of the pupils in the class. Freeman (2007) describes epistemological bricolage as a legitimate manner



of learning concerned with piecing together different elements of information and experience. However he also cautions that it may be characterised by uncertainty, which can be destructive and debilitating or creative and generative and advises that the work of learning is to manage it effectively.

### *Summary*

The antecedent level identified a proactive and enthusiastic approach to new professional challenges by all ten teachers. This finding may be linked to the high motivation levels that were evident and as previously pointed out may be peculiar to this research population and linked to the selection process used for the research. The apprehension experienced by five of the six teachers who had completed the post-graduate certificate programme at the initial establishment of the class emerged as a distinguishing factor between both groups of teachers, which may have impacted on teachers' decisions to engage in the programme. Only one teacher who had not completed the programme referred to experiencing similar apprehension. Teachers' previous teaching experiences and/or the prior experience of the school in meeting the needs of the pupils with ASDs emerged as factors, which appeared to affect the apprehension levels of teachers at the initial establishment of provision for pupils with ASDs. The requirement for teachers applying for the post-graduate certificate programme to have satisfactorily completed their probationary period emerged as a possible factor that may have impacted on the choice of programme. While deficiencies related to special education input were evident in ITE programmes, it was also evident that ITE provided teachers with a range of relevant knowledge, understanding and skills linked to an adequate mastery of the knowledge base of teaching and proficiency in decision making (Burke, 2000). Prior professional experiences related to involvement in the area of special education, educational disadvantage, and teaching junior classes emerged as factors that could also potentially impact on teachers' practice.

### **Conclusion**

An examination of the antecedent level in this chapter and the findings of the literature review tracing the development of provision of pupils with ASDs in Ireland further assist in developing an understanding of ASD-specific CPD in Ireland and

suggest some reasons why teachers may have chosen to access the post-graduate certificate programme. Chapter Nine presents findings and discussion in relation to Levels One to Five of the model for evaluation of CPD suggested by Guskey (2000). Additional emerging findings are also presented.

## CHAPTER NINE

### FINDINGS AND DISCUSSION TWO

#### Introduction

The findings of the research are presented in this chapter with reference to the model suggested by Guskey (2000) and Muijs et al. (2004) under the following headings: Level One: Appropriateness of Content and Process, Level Two: Participants' Cognitive, Affective and Behavioural Learning, Level Three: Organisational Support and Change, Level Four: Participants' Use of Knowledge and Skills and Level Five: Pupils' On-Task Behaviour. The flexible approach adopted in the context of this model allowed for the identification of additional findings to emerge. These findings are presented in this chapter under Additional Emerging Issues. Finally a summary of the research findings is provided.

#### **Analysis of Findings within the Model Suggested by Guskey and Muijs et al.**

##### **Level One: Appropriateness of Content and Process**

Eleven selective codes were recorded in relation to teachers' views of the appropriateness of the content and process and cognitive, affective and behavioural learning associated with the post-graduate certificate programme. See Table 26 for details of these codes.

The content and process of the programme was described in very positive terms by all six teachers. The comments of two teachers encapsulate a composite view of the programme as "*the greatest experience ever*" and "*tough, very hard but good*". As detailed in Table 26 below, a number of themes emerged at Level One, which did not feature in the interview data of the four teachers who had not completed the programme. This suggests that these themes may be viewed as valued outcomes associated with participating in the programme.

**Table 26. Nature and Frequency of Selective Data Codes related to Teachers' Views of the Appropriateness of the Content and Process and Cognitive, Affective and Behavioural Learning Associated with the Post-Graduate Certificate Programme**

Teachers' Views of the Appropriateness of the Content and Process and Cognitive, Affective and Behavioural Learning Associated with CPD	Teachers' Views of the Appropriateness of the Content and Process and Cognitive, Affective and Behavioural Learning Associated with CPD
Teachers who had Completed the Post-Graduate Certificate Programme (11)	Teachers who had Not Completed the Post-Graduate Certificate Programme (5)
Appropriateness of Content and Process /Cognitive, Affective and Behavioural Learning (150)	Cognitive, Affective and Behavioural Learning (46)
Stimulus for Further Learning (6)	On-line Learning (3)
Reference to an Unpleasant Continuing Professional Development Experience (5)	Reference to an Unpleasant Continuing Professional Development Experience (5)
The Value of External Experienced Experts (8)	Continuing Professional Development Programmes Accessed (15)
Curriculum (45)	Curriculum (23)
Access to Parents of Pupils with Autistic Spectrum Disorders (2)	
Interacting with Other Practitioners (9)	
Engaging with the Experiences of Individuals with Autistic Spectrum Disorders (11)	
Specific Benefits of Engaging with the Programme (18)	
Potential Additions to the Programme (25)	
Practicum (21)	

### **Content**

Reference was made to the positive impact of external experts, parents and individuals with ASDs on teachers' professional practice. Four teachers referred to the positive impact on their professional development of external experts who had provided input on the programme in terms such as *"I saw people like Rita Jordan and Glenys Jones and I felt they had a wealth of experience with children with autism and really felt they knew what they were talking about"*. One teacher referred positively to the parental input in the programme, which enabled her to empathise

with what parents had been through and instilled in her a hope that through CPD there might be improved outcomes for pupils. Five teachers affirmed the knowledge and understanding that they had acquired from engaging with the experiences of individuals with ASDs during the programme. Referring to a presentation by Ros Blackburn, an individual with ASDs, one teacher remarked “*ah, she’s brilliant. Like what she says during her thing, stuck more with me than everything I have ever read*”. Only one of the teachers who had not completed the programme referred to the experiences of individuals with ASDs as impacting on her teaching. The observations of teachers who had completed the programme confirm the literature related to the benefits of exploring the experiences of individuals with ASDs reviewed for this research (Williams, 1993, Grandin, 1995; Gerland, 1996; Lawson, 2000; Trevarthen, et al., 1998; Sainsbury, 2000; Jackson, 2002; Bogdashina, 2006; Waller, 2007). Adopting an autobiographical approach has the potential to enhance understanding and constructively inform educational and other service provision (Barrett, 2006; Gates, 2006; Miron, 2006; Parsons et al., 2009).

### *Process*

The process was viewed positively by all six teachers. Four teachers referred to the process as a stimulus for further learning through nurturing a desire to engage in lifelong learning related to pupils with ASDs, developing writing skills and encouraging participants to read and research the area. The supportive and enabling approach adopted by the lecturers on the post-graduate certificate programme was referred to specifically by two teachers and contrasted with an experience of a special education-specific CPD programme described by one teacher in terms of generating a sense of failure and depleting her professionalism. Disturbingly the teacher stated “*I expected to fail and I would have done anything to quit at that stage. I very nearly had a nervous breakdown*”. This teacher subsequently completed the post-graduate certificate programme and noted that during the supervised practicum “*...the tutor went over everything. She sort of said you could do this better and showed me places where things weren’t going so well and showed me where things were and suggested how things could be improved*”. The special education-specific CPD programme was also criticised in similar terms by a teacher who had participated in, but had not successfully completed the programme and a teacher who had successfully completed

the programme. This programme relates to special education and has particular applicability to ASD. These findings suggest that there is a need to ensure that a directory of quality accredited and non-accredited CPD in this area is available in order to ensure that teachers access CPD that effectively meets their needs and from which they feel affirmed and supported. Jones et al. (2008) identified a similar need to audit training needs and provision.

Guldberg and Pilkington (2007) describe a socio-cultural view of learning in which language and thought are closely linked and cognitive and affective development are strongly influenced by opportunities to talk. Analysis of the data suggests that participation in the post-graduate certificate programme creates a learning community for participants, which is one of both discourse and practice (Guldberg and Pilkington, 2006). The community's professional practice is enriched through sharing common interests, knowledge, experience, concerns, values and exchanges centred on problems that emerge in their work. Five teachers affirmed the process of engaging and interacting with other participants on the programme. One teacher described the reassurance she experienced in terms of "*sometimes you would be going around worrying about something and someone would say forget it. You know, it's not the end of the world, it helps*". Another teacher stated that "*I found it good in that I met a lot of people up there who were in the same job as me*". All five teachers considered they learned from their colleagues' experiences. The sense of engagement created by being part of this learning community has the potential to impact positively on participants' learning (Schön, 1983).

A supervised practicum was part of the programme for two of the six teachers who had completed the post-graduate certificate programme. Five of the teachers remarked in relation to their views on the value of a supervised practicum. Both of the teachers who had completed the practicum referred to experiencing levels of stress but also acknowledged the motivating role the practicum played and the constructive support and advice they received from their supervisors. One of the teachers remarked that it was "*nice to feel that there is a bit of pressure, if you are not bothered it means you are not worried or you don't care less*", while the other teacher stated that "*it was excellent, it wasn't very nice mind you*". A teacher who

was not required to complete the practicum suggested that age and experience were factors related to whether she would view a practicum as assistive and suggested that those supervising the practicum should be more experienced in the area than the teacher whom they are supervising. The final two teachers viewed the concept of a practicum as frightening and a potential source of stress. However one of these teachers acknowledged the potential of the practicum to sharpen practice. An analysis of the video data suggests that there were no significant differences between the practice of the two teachers who had engaged in a practicum and those who had not during the period of observation. However the duration of classroom observation was for periods of twenty-six to fifty-four minutes only and should be considered when interpreting this finding as differences may have emerged during longer periods of observation.

Schön is credited with developing the construct of the practicum (Moon, 1999). Schön (1987) observed that a practice may be learned on one's own, through an apprenticeship or entering a practicum. The author suggested that learning on one's own has the disadvantage of requiring each student to reinvent the wheel and that apprenticeship may be compromised by pressures of performance and time. A practicum provides the opportunity for designing a setting for the task of learning a practice with coaches assisting the students and a dialogue developing between them. Schön acknowledges that a practicum may also fail through overloading students with practical constraints in striving for realism or because too many important features of real-world practice are omitted. The author concludes that it is always difficult to assess the learning outcomes of a practicum and that the extent of the learning may only become evident in the course of an individual's further development. I concur with Schön that a practicum is dependant on the convergence of meaning that develops between the student and the coach. The coach should demonstrate ways of showing and telling matched to the individual qualities of the student, learn how to read the student's difficulties and potentials from his/her efforts at performance and discover and test the responses to suggested interventions. The student should engage in operative listening, reflective imitation, reflection on her own knowing-in-action, and the coach's meaning. Moon points out that Schön's constructs have been subjected to no better testing and have no more claims to be

right than other related conceptions except that many practitioners and their educators demonstrate enthusiasm for his work. The latter fact is testimony to the value of the concepts developed by Schön and I consider that the practicum can potentially benefit both teachers and tutors through the creation of new knowledge and the possibilities for further dissemination of good practice by the tutors. Additionally the concept of the practicum can be linked to the alternative model of teacher change proposed by Guskey (2002), where he suggests that there is an adequate evidence-base to support the idea that change is primarily an experientially based learning process for teachers that stems from an observation of improvement in student learning. Guskey suggests that in order for the use of new practices to be sustained, teachers will need to receive regular feedback on the effects of their practice. As an initial step in this process, the practicum provides an appropriate mechanism for feedback to be provided.

All teachers who had completed the post-graduate certificate programme suggested that there was a need for both additional school-based practical CPD and continuous information on new strategies and approaches to assist teachers in implementing the broad theoretical base, which they had acquired while participating in the programme. This is also commensurate with the views of Guskey (2002) above. Teachers' views in relation to the additionality required can be summarised in one teacher's statement "*the biggest thing for me and I have to be honest with you Emer, is if someone went around the country and sat down with every teacher in autism and said this is what I do, I do news time, I do circle time, I do group time, I have got a waiting area. Here are pictures of my class. That is the best thing you could ever possibly get. Instead of actually reading realms of books about autism and how to deal with them and all of this*". One teacher who had worked with teachers in schools observed the difficulty some teachers have in translating theory into practice and the criticality of being assisted in doing so by an experienced practitioner in the field. Two teachers suggested that on-line learning could beneficially be used in CPD programmes and one teacher remarked on the importance of maintaining quality in on-line programmes. One of the teachers who had not completed the post-graduate certificate programme described an on-line programme as "*boring*" and commented that "*I just find that a waste of space. I can go home and read anytime; I don't want*



*to sit in front of a computer to read*". This teacher referred in positive terms to a week-long programme on the education of pupils with severe to profound general learning disabilities she had attended in St. Patrick's College, Drumcondra, Dublin, stating that *"I did a course in Drumcondra for children with special needs and I went on a week-long introductory. I found that wonderful because it was nice to able to mix with like-minded people and it was very practically geared up"*. The availability of CPD opportunities has extended considerably since the teachers who participated in this research completed the post-graduate programme (Hanafin, 2008; Department of Education and Science, 2009c; Special Education Support Service, 2009).

### **Summary**

External experts, parental experiences and the views of individuals with ASDs were expressly referred to as positive features of the post-graduate certificate programme and can be viewed as valued outcomes of the programme. Positive features of the process of engaging in the programme were identified as its potential as a stimulus for further learning, the enabling approach adopted by the tutors and its contribution to the creation of a learning community of discourse and practice for participants. The value of a practicum in developing teachers' practice was acknowledged in addition to its potential to generate stress and anxiety. The findings also suggest that a directory of quality accredited and non-accredited CPD should be available in order to ensure that teachers can access a varied and appropriate range of effective CPD.

### **Level Two: Participants' Cognitive, Affective and Behavioural Learning**

This Level provides an overview of the areas of participants' cognitive, affective and behavioural learning. Initial open-coding of the interview data identified a range of codes related to the general impact of CPD on participants' cognitive, affective and behavioural learning as detailed in Appendix K. As illustrated in Table 2 previously, selective coding of the data generated eleven codes, some of which related to the appropriateness of the content and process of engaging in the post-graduate certificate programme. The analysis of the interview, video and photographic data is clustered together in themes related to the development of a knowledge and understanding of ASDs, classroom organisation, accommodation of the triad of impairments and curriculum access and teaching approaches.

### *A Knowledge and Understanding of Autistic Spectrum Disorders*

It has been suggested that a knowledge of ASDs and the associated understanding and skills are critical in teaching pupils with ASDs (Jordan, 2007b; Jones et al., 2008). The selective code concerned with the specific benefits of engaging with the post-graduate certificate programme referred to teachers' views that the programme had contributed to the development of a knowledge and understanding of ASDs through the acquisition of new knowledge, assisting in the merging of theory and practice and supporting the fine-tuning of teaching skills. These benefits are encapsulated in the observations of the six teachers *"I felt that the more I learnt the more I understood these children and the calmer a teacher I was and the more I was able to cope. I didn't have children sitting in front of me that I didn't have a clue what was happening so it made it all the more interesting"*, *"I was learning very, very new things"*, *"some things now do stand to me a lot. I would be inside my classroom and I remember, think, oh now somebody said in that book you know about these, or this is a characteristic or trait and this is how they dealt with it..."*, *"it was like you had access to this wealth of knowledge and experience...it was always delving underneath to understand why you were doing something and it was very person-centred as well"* and *"it's the logical background to autism from the people who have autism who have told us, one thing at a time, make it visual, give us time"*. While the interview data of all teachers who had completed the programme indicated that they had acquired a knowledge and understanding of a broad theoretical base related to the learning and teaching of pupils with ASDs, the classroom observation video data suggests that individual teachers' understanding of the theoretical base differed as expressed by their demonstrated knowledge, understanding and skills and curriculum implementation. See Table 20 previously for a quantitative summary of these data. This is commensurate with research on teachers' CPD where it has been observed that knowledge accessed may not always be translated into practice (Guskey, 2002; Yoon et al., 2007; Chadwick, 2008).

As indicated in Tables 16 to 19 previously, the four teachers who had not completed the post-graduate certificate programme had accessed a variety of CPD and had a range of prior teaching experiences. Data were not collected on individual CPD programmes accessed by teachers and therefore it is not possible to provide specific

details on the content of the programmes. Teachers referred to accessing CPD related to positive behaviour support, the PECS, the TEACCH, sensory integration, social stories and online learning related to ASDs and ABA. One teacher had completed a post-graduate programme in ABA and had a Master's degree in special education. The research findings suggest that the knowledge and understanding demonstrated by teachers who had not completed the programme were related to their teaching experiences, the CPD they had accessed in addition to the range of epistemological bricolage individual teachers had engaged in. The class teacher in School G, who had completed a TEACCH programme, repeatedly referred to elements of the TEACCH approach and the impact they had on her work. She remarked that *"...to have ready made boxes that is great and saves you a lot of time"*, *"I think they need their own space, they like to have their own little work station but they don't always need to work there"* and *"but children with autism find something different hard, you have to kind of prepare them in a way. I think then they need to know the routine, they need to know they feel secure..."*. This teacher had attended a week-long induction programme for pupils with severe to profound general learning disabilities and referred to her experience of teaching these pupils and how it impacted on her teaching, *"let me give an example, when I was in (name of school deleted), I found the most difficult thing was I was working with sixteen, seventeen, eighteen- year old girls and they are adult women and yet to give them tasks like pegs and things they had been doing for ten years of their life, you weren't respecting the dignity of their life. It should be... maybe you could do matching socks"*. The class teacher in School I had completed an online programme on understanding ASDs, and a TEACCH and PECS programme. She had also completed training in a Holistic Approach to NeuroDevelopment and Learning Efficiency (HANDLE). The approach has reported improvements in communication, social interaction, eye contact, muscle tone, self-stimulatory behaviours, eating issues and sleep for individuals with ASDs (HANDLE, 2009a). The HANDLE approach combines a number of conceptual frameworks related to visual-perceptual motor programmes, sensory sensitivity and integration, neurodevelopmental therapy, developmental optometry, auditory therapy, developmental theory, language acquisition, multisensory learning, nutrition, homeopathy, reflexology and principles from the work of Montessori and Piaget (HANDLE, 2009b). While parents and individuals with ASDs have reported on the

benefits of the HANDLE approach, it has not been independently reviewed. The comments of the teacher in School I reflect the knowledge accessed during the TEACCH programme, learning from experience and epistemological bricolage, *"I am already making plans for next September and the layout of the room and what I need to change and what works better for one of them. And I am already looking at what needs to be modified. When I think about this time last year. I was doing well this time last year but I have come on so much like. An awful lot of it is a lot of research myself and trial and error, seeing what works with them and what doesn't work. I have tried lots of things..."*. The class teacher in School H, who had accessed CPD on TEACCH, interactive play and creating visual resources using the computer observed that *"I have down here a structured classroom, they need a structured classroom, so that is the TEACCH and the PECS. Visual learning, that there is the use of projector and Storybook 3 and Powerpoint and everything like that. Visual, visual, visual"*. The teacher in School J had post-graduate qualifications related to special education and stated that *"I think with the learning disabilities you can focus more on the learning difficulty and using your differentiated instruction and using your doing everything short and fast, and using your visuals and probing verbal and if they can't read, then use your functional reading. But if you have your autism on top of that you have to understand the child"*. An analysis of the classroom observation data suggests that the knowledge and understanding of ASDs acquired by the four teachers who had not completed the post-graduate programme impacted on their practice. Similarly to the teachers who had completed the programme, the classroom observation video data suggests that individual teachers' understanding of the theoretical bases they had acquired differed as expressed by their demonstrated knowledge, understanding and skills and curriculum implementation. See Table 20 previously for a quantitative summary of these data. The impact of the CPD accessed by teachers who had not completed the post-graduate programme reflects recently conducted reviews of research, which suggest that reformers of teachers' CPD should focus on topics that are most important to teachers rather than the length of time, organisation and structure of the programme (Kennedy, 1998; Yoon et al., 2007). Guskey and Yoon (2009) conclude that while criticism of short workshops that are poorly organised and focus on unproven ideas and strategies may be warranted, the positive role of short focused workshops in the provision of CPD should not be

dismissed. Conversely while short workshops, self-learning and epistemological bricolage have been affirmed in the literature, their potential limitations related to their arbitrary nature have also been pointed out (Schön; 1987; Freeman, 2007; Guskey and Yoon, 2009). The literature review suggests that the content of CPD for teachers of pupils with ASDs should reflect both theoretical development and teaching techniques in order to enable teachers to conceptualise teaching challenges and implement informed teaching approaches (Jennett et al., 2003). Maintaining a balance between theoretical input and teaching techniques is critical in order to avoid the potential for the disempowerment and deskilling of teachers, which Jordan (2007b) suggests can evolve from a knowledge of techniques alone.

### ***Classroom Organisation***

The organisation of the physical environment has been identified as a significant factor that impacts on the engagement levels of pupils with ASDs (Hogdon, 1995; Schopler et al., 1995; Porter and Ashdown, 2002). Adapting the environment in order to compensate for deficits related to social, communicative and rigidity of thought and behaviours has been found to be of benefit for pupils with ASDs (SIGN, 2007). The SIGN National Clinical Guideline comments on this in terms of good practice and while observing that it had widespread practitioner support, it was suggested that further research was required in order to adequately assess its role in the education of children with ASDs. Options related to environmental adaptations were described as including the provision of visual prompts, reducing the requirements for complex social interactions, using routine, timetabling and prompting and minimising potential sensory irritations. As indicated in Table 20 previously, all six teachers who had completed the post-graduate certificate programme and three of the teachers who had not completed the programme always or almost always accommodated the needs of pupils with ASDs in relation to the physical layout and organisation of the classroom, routine, timetabling, visual scheduling and environmental stimuli.

### ***Classroom Organisation – Physical Layout and Organisation of the Classroom***

The physical layout and organisation of all classrooms was based on the TEACCH approach. Work stations, group-teaching areas, curriculum displays, play/leisure areas and visual schedules were differentiated in accordance with pupils' different levels of developmental function and individual learning and teaching needs. Figure

9 below illustrates workstations adapted for a pupil with a mild general learning disability and a pupil with a severe general learning disability. The pupil with a mild general learning disability required less prompting in completing tasks independently and could manipulate the photographic visual schedule to the left of the work station unaided. This pupil worked in a left to right sequence and followed a work system through photographic visual prompts from a top-to-bottom schedule placed on the notice board in front of the table. The workstation did not require screening from the rest of the classroom and the pupil was not distracted by regular classroom activity. The pupil with a severe general learning disability required constant verbal and physical prompting in order to manipulate his visual schedule and complete tasks. This pupil could not cope with distractions in the environment and the workstation was securely screened off from the rest of the classroom. The pupil followed a left to right work system and all tasks were labelled with coloured shapes as displayed on the tasks stored on the shelves in the photograph.



Figure 9. Physical Layout of the Classroom

The photographic data in Figure 10 below indicates that organised and accessible systems were evident in the storing of resources. In School B, pupils' personal belongings were stored in specifically allotted compartments. In School G, the computer was concealed through the use of a purposefully-built cabinet when not in use. Pupils responded positively to the use of table mats in School E and a table cloth

in School A to indicate recess periods. Pupils' safe exit from the classroom in School H was facilitated through the taping of footprints on the floor. The labelling and clear organisation of the library area in School I supported pupils in accessing materials in an efficient manner.

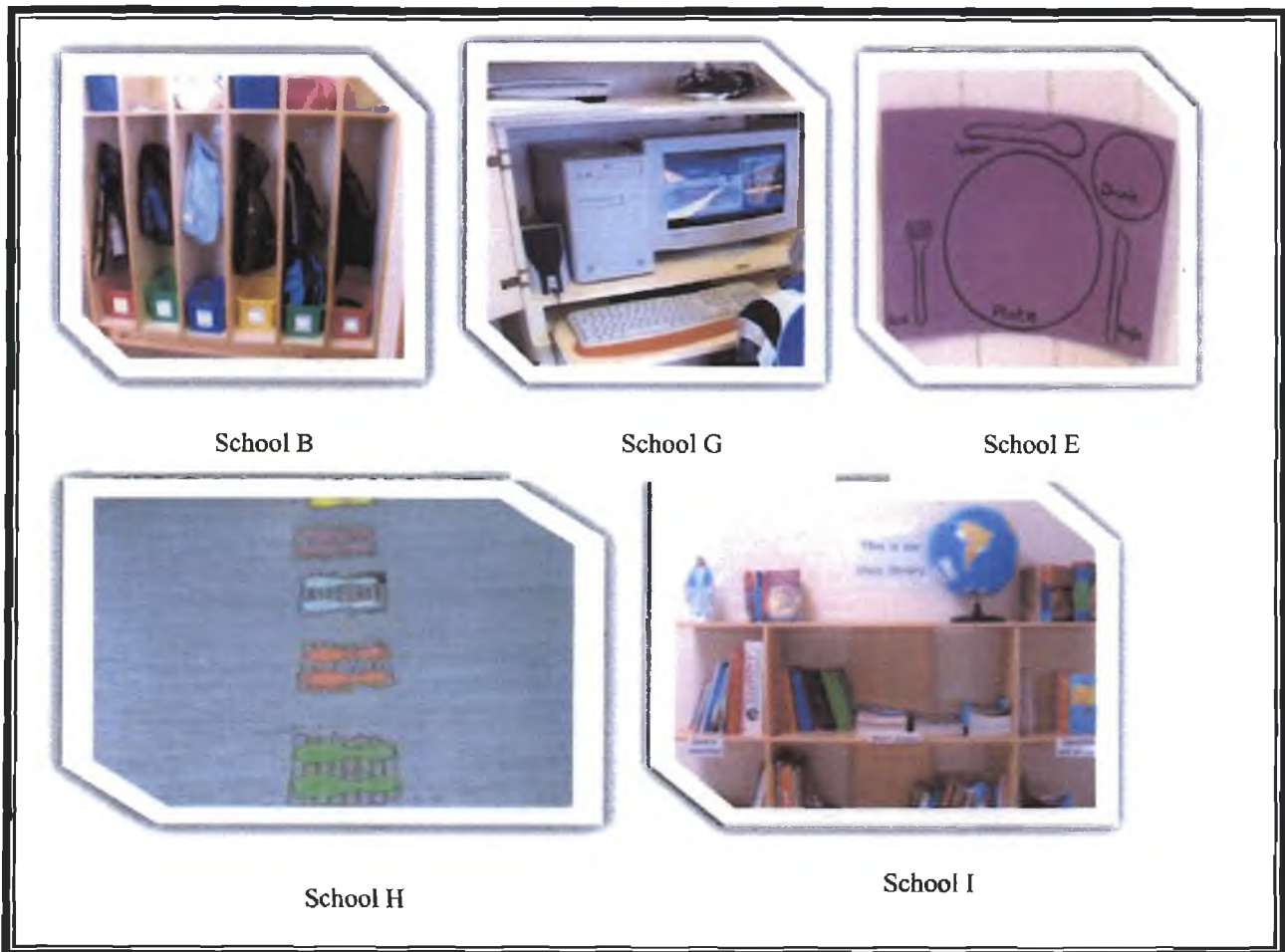


Figure 10. Classroom Organisation

***Classroom Organisation -- Routine, Timetabling and Visual Scheduling***

The use of routine, timetabling and visual schedules was a feature of all teachers' practice. Pupils demonstrated a knowledge of the sequence of activities and transitioning between activities. In School A, pupils responded to different melodies during transition periods. The teacher led the pupils in singing a song related to the days of the week to indicate the beginning of the language lesson and the words "circle-time" were sung in tune to a melody by the teacher to indicate the transition to a circle-time activity. All six pupils responded in a timely manner through organising

themselves appropriately for the lessons and directing the focus of their attention to the teacher. Three of the six pupils also sang the melody with the teacher. As illustrated in Figure 11 below, the teacher in School B had created a distraction-free waiting area adjoining the door to assist in developing pupils' understanding of transitions and all pupils accessed the area in an appropriate manner prior to the morning recess period.



Figure 11. Transition Area

Visual schedules were manipulated independently by pupils or with levels of verbal and physical prompting by the teacher and/or SNAs. Figure 12 below provides samples of these visual schedules. Schedules of activities with photographs and symbols were used in School A for pupils in a junior class in a mainstream school. In School B, a schedule with text, symbols and numbers was used for a pupil in a junior class in a mainstream school with the requisite literacy skills. A visual schedule was used in School H to teach primary-aged pupils in a special school the steps required in brushing teeth. A whole-class visual schedule was used in School I to alert senior pupils in a special school to the sequence of activities in the school day.



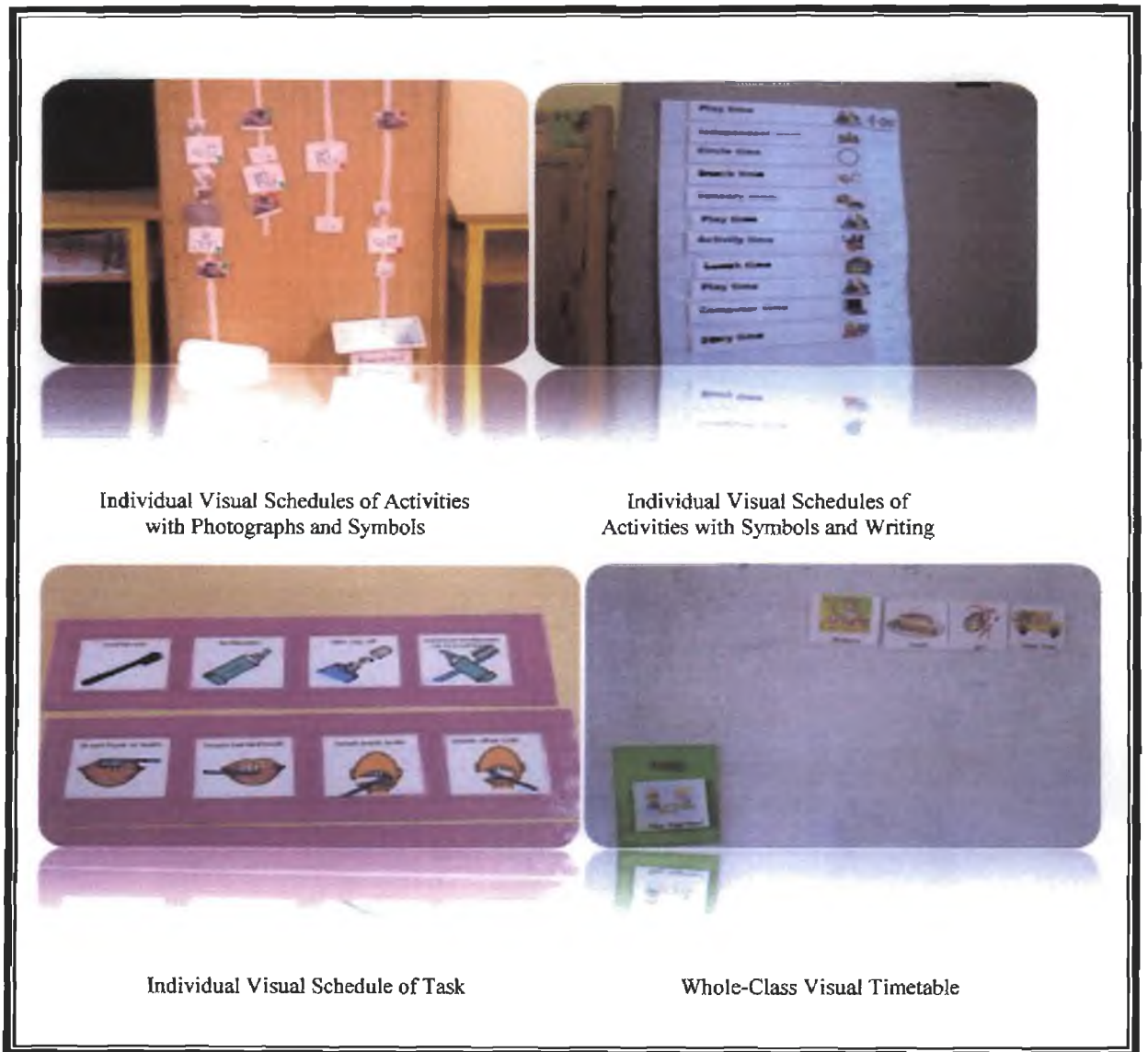


Figure 12. Visual Schedules

***Classroom Organisation – Environmental Stimuli***

It has been observed that sensory and perceptual impairments experienced by individuals with ASDs can lead to an under or over sensitivity to noise, smell, taste, light, touch or movement, fine/gross motor difficulties, poor organisational skills and difficulties in managing the time and sequence of activities (Autism Working Group, 2002a; Jordan, 2001; Bogdashina, 2006). While research has indicated that these impairments are not peculiar to individuals with ASDs, the experiences of individuals with ASDs suggest that they should be considered and the required environmental adaptations made (Kanner, 1943; Sainsbury, 2000; Rogers and Ozonoff, 2005; Bogdashina, 2006; Waller, 2007). It has been observed that sensory

and perceptual impairments can lead individuals to engage in self-injurious behaviours, which highlights the criticality of teachers accommodating the implications of these impairments for individual pupils in the classroom environment (Grandin, 1995; Bogdashina, 2003).

A low-stimulus visual classroom environment was created in all of the classrooms where teachers had completed the post-graduate certificate programme and in three of the classrooms where pupils had not completed the programme. Classroom displays were organised in a manner that reduced their potential to distract pupils, muted paint colours were used and distractions were reduced in individual and group-teaching areas. In school I, the use of a dimmer switch with a conventional lighting system assisted in reducing glare. In five of the schools where teachers had completed the post-graduate programme and in three of the schools where teachers had not completed the programme, auditory stimuli were controlled through the use of a carefully modulated tone of voice and a reduced language of instruction by both SNAs and teachers. In the two schools where attention was not directed to these elements, pupils appeared less focused and distracted when receiving instructions and required constant prompting to complete a handwriting and Mathematics' task. This reflects the view of Grandin (1995) that teachers should speak slowly to accommodate a nervous system that processes auditory information slowly. Williams (1993) suggests that the more predictable and calm the teacher's voice is the less emotional fear it creates

A high-stimulus environment was created through the use of brightly coloured classroom displays and decorated work stations in one classroom where the teacher had not completed the post-graduate certificate programme. When questioned in relation to this aspect of the classroom environment, the teacher suggested that she had observed no associated negative impact on pupils' behaviour. However an analysis of the management of pupils' on-task behaviour in this classroom suggests that greater attention to organising the classroom environment and providing distraction-free resources that would allow Pupil 1 to engage in the required task may have increased on-task behaviour in School G. See Level Five for a further analysis of on-task behaviour.

### *Accommodation of the Triad of Impairments*

In accordance with the concept of special educational needs developed in the literature review, group pedagogic needs related to accommodating the triad of impairments can be associated with the learning and teaching of pupils with ASDs (Lewis and Norwich, 2005). Jordan (2005) suggests that children with ASDs have unique needs that are recognised through ASD-group differences but not solely determined by such differences. While all teachers accommodated the triad of impairments, there were differences in the degree to which the triad was accommodated by individual teachers. Table 27 provides a composite record of the classroom observation in relation to the accommodation of the triad of impairments by individual class teachers during the twenty-six to fifty-four minute periods of video data recorded for each class.

<b>Table 27. Accommodation of the Triad of Impairments</b>									
<b>1= never/almost never; 2=rarely; 3=sometimes; 4=often; 5=always or almost always</b>									
An awareness of the <b>social deficits</b> of the triad of impairments permeates learning and teaching activities.									
School A	School B	School C	School D	School E	School F	School G	School H	School I	School J
5	4	4	5	4	4	3	4	5	3
An awareness of the <b>communication deficits</b> of the triad of impairments permeates learning and teaching activities.									
School A	School B	School C	School D	School E	School F	School G	School H	School I	School J
5	4	5	5	5	4	4	4	5	5
An awareness of the deficit of the triad of impairments associated with <b>rigidity of thought and behaviour</b> permeates learning and teaching activities.									
School A	School B	School C	School D	School E	School F	School G	School H	School I	School J
5	3	5	5	5	4	4	5	5	5

The differences in scores recorded in relation to the accommodation of communication and rigidity of thought and behaviours did not appear to be directly related to participation in the post-graduate certificate programme as there was similar variation in the degree to which these were accommodated in both groups. There was less variation in the degree to which those teachers who had completed the programme accommodated the social deficits of the triad compared with the variations in scores recorded for teachers who had not completed the programme. Impairments in social understanding lead to poor social responsiveness in individuals with ASDs (Aarons and Gittens, 1998). The social difficulties associated with ASDs

have been described as probably the most defining and potentially disabling feature of the disorder (Jones, 2002b). This is confirmed by the experiences of individuals with ASDs and their carers (Williams, 1993; Grandin, 1995; Sainsbury, 2000; Jackson, 2002; Bogdashina, 2006). Wing (2008) observes that from research and clinical work it is becoming more obvious that the social impairment underlies the triad and points out that it is the social aspects of communication and imagination that individuals experience difficulty with. An analysis of the classroom observation data suggests that directing teachers' attention to the importance of mitigating the effects of the social deficits of the triad of impairments constitutes a valued outcome of participating in the post-graduate certificate.

Of the six teachers who had completed the post-graduate certificate programme, an awareness of the social deficits of the triad of impairments permeated learning and teaching activities always or almost always for two teachers and often for the remaining four teachers. A greater variation was evident in the awareness by those teachers who had not completed the programme, with two demonstrating awareness sometimes, one often and one always or almost always. In the case of the latter teacher, the pupils in the class were more senior pupils with mild general learning disabilities and had more developed social skills than the pupils in the other three classes. Teachers employed a range of strategies related to mitigating the social deficits of the triad including placing particular emphasis on developing pupils' social skills through all activities and consistently promoting pupils' awareness of each other. Promoting turn-taking, encouraging active participation in group activities, deliberately constructing opportunities that required pupil-interaction and incorporating and discussing choice during lessons were variously employed. Pupils were encouraged to listen to and respond to each other. For example in School I, the teacher used carefully structured questioning and role-play scenarios to develop empathetic understanding during a History lesson and turn-taking skills and pupils' awareness of each other was successfully promoted through the use of age-appropriate board games. The criticality of developing the social skills of pupils with ASDs and their contribution to improving individuals' quality of life and future prospects has recently been highlighted (Council of Europe, 2009b). Allard (2009) observes that only fifteen percent of adults with ASDs in England are currently in

full-time paid employment and concludes that transitioning arrangements are deficient. The successful development of social skills is one of the key factors to ensuring that individuals with ASDs successfully transition to adult services and where appropriate independent learning.

There was less variation evident in the awareness of the communication deficits of the triad of impairments through learning and teaching activities between those teachers who had completed the post-graduate certificate programme and those who had not. Four of the teachers who had completed the programme and two who had not always or almost always demonstrated such awareness and two from both categories often demonstrated this awareness. Communication was promoted through the use of a variety of strategies that included a clear and unambiguous language of instruction, modelling of correct responses, physical, verbal and gestural prompting systems, the use of visual schedules and work systems, allowing pupils an extended response time and employing resources with a high visual content. Pupils were encouraged and supported in communicating in a meaningful manner with the class teacher, each other and support staff. The attention directed by all teachers to developing pupils' communication skills is commensurate with the findings of the literature review related to the importance of implementing communication programmes that address the child's difficulties in interpreting verbal and non-verbal expressions and gestures, confusion with the semantic and pragmatic aspects of language, speech patterns characterised by echolalia, metaphorical language, neologisms and pronoun reversals, inability to respond spontaneously and limited conversation repertoires (Jordan, 2001; Jones, 2002b; Baron-Cohen and Bolton, 1993; Jordan and Powell, 1995; Hodgdon, 1999; Welton, 2004; Plimley and Bowen, 2006).

Four teachers who had completed the post-graduate certificate programme and three who had not always or almost always demonstrated an awareness of the deficit of the triad of impairments associated with rigidity of thought and behaviour throughout activities. One of each category often demonstrated such awareness. One teacher who had completed the post-graduate programme sometimes demonstrated this awareness. Awareness of this deficit of the triad was evident in the opportunities

provided for pupils to engage in turn-taking and share resources during activities. Where there was a risk that this deficit might interfere with pupils' access to learning, strategies were employed to refocus the pupils' attention. The potential negative effects of not accommodating this deficit were illustrated in an analysis of four critical events that occurred. Two of these were managed effectively and two resulted in the pupils becoming disengaged from their required tasks. In School B, play activities were over and the pupil was allowed to retain the toys he had been playing with during the ensuing group language lesson. The SNA gestured to the pupil to place the object in a box and the pupil became increasingly distressed, as indicated by the increasing frequency and pitch of vocalisations observed. The pupil continued to manipulate the object in a perseverative and repetitive manner and did not engage in a meaningful manner in the group-activity. In contrast a similar incident occurred in School A, where a pupil continued to insist that a photograph on a display board should be placed in a particular position in order to conceal it. The SNA intervened with occupational therapy exercises to address sensory differences exhibited by the pupil. The teacher adopted a graduated series of strategies that included explaining that everyone would like to see the photograph, ignoring the behaviour and finally when the pupil re-engaged with the lesson, asking another pupil to reposition the photograph appropriately. In School G, the pupil discovered that the answers to Mathematics questions were on the flip-side of a task card and insisted on copying the answers rather than doing the number operations. Despite several requests by the SNA, the pupil completed the task through copying numbers and demonstrating high levels of anxiety through verbalising. In School I, a pupil began to get excited with regard to his own interests and verbalised profusely during a language group-teaching activity, the teacher calmly responded saying "*very good*" and successfully redirected attention to the language lesson saying "*so this is a sad story*". The analysis of these critical events demonstrates the importance of remaining alert to repetitive and obsessional behaviour patterns that have the potential to interfere with learning. The possibilities of these behaviours being linked to sensory and perceptual impairments should also be considered (Autism Working Group, 2002a; Jordan, 2001; Bogdashina, 2006). As demonstrated in Figure 13, the selection of a range of learning and teaching resources also contributed to mitigating this deficit. In School A, pupils were on occasions provided with plastic letters as an alternative to pencil.

In all classes, the duration of pupils' on-task activity was timed either through visual schedules, prompting systems, manual signs or timers. In School C, toys were selected based on pupils' identified interests and access to activities managed by the use of a timer.

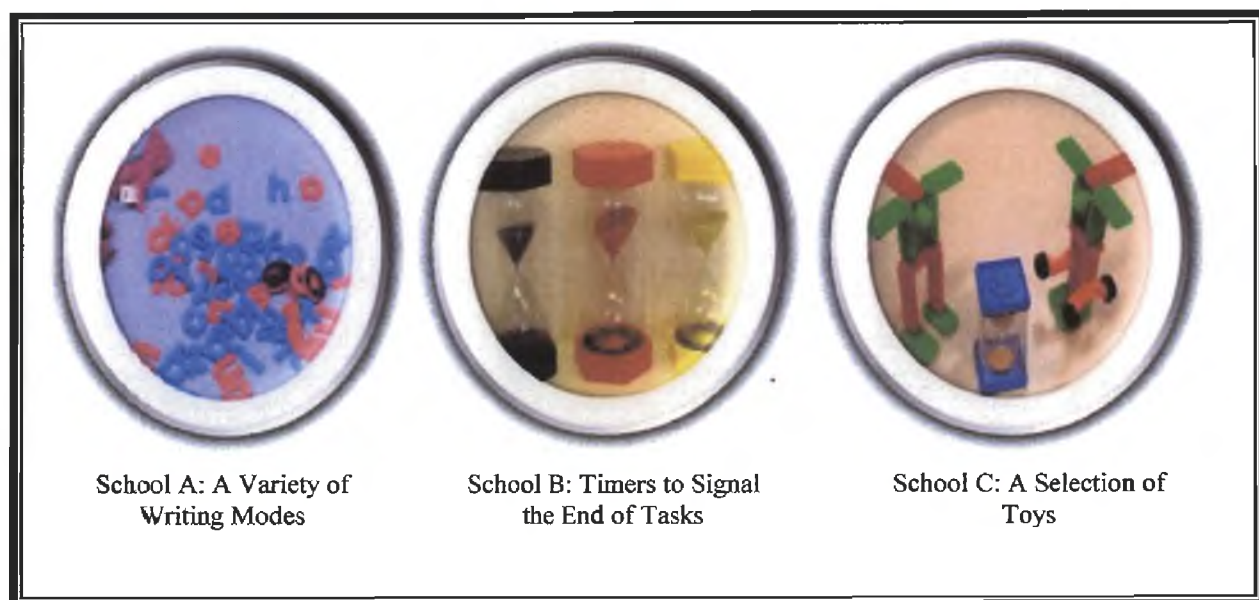


Figure 13. Resources That Contribute to the Mitigation of Rigidity of Thought and Behaviours

The curriculum areas of Drama, Visual Arts, Music, English, SESE and SPHE were observed to potentially contribute to the development of pupils' play and imagination skills (NCCA, 1999). In School H, story, drama and teacher-devised resources were used effectively to develop pupils' play and imagination skills. The teacher read the story of "A Squash and a Squeeze" and paused for pupils' responses (Donaldson, 1993). The pupils responded to the teachers' pauses as she read the story. Individual pupils were given cardboard figures of the little old lady, the wise old man, a hen, a goat, a pig and a cow and responded appropriately to the actions related to the characters in the text. The following is an excerpt from the story being read.

Teacher: *A little old lady lived all by herself with a table and chairs and jug on the shelf. A wise old man heard her grumble and grouse.* The teacher asks where the little old lady is and a pupil lifts the cardboard figure from the box and shows it to the class. *There's not enough room in my house.* The teacher asks the pupils what the little old lady says and pauses.

Pupils (assisted by the teacher): *Wise old man, won't you help me, please, my house is a squash and a squeeze.*

Teacher: *"Take in your hen" said the wise old man.* The teacher asks where the wise old man is and a pupil shows the cardboard figure to the class. *Take in my hen. What a curious plan. Well the hen laid an egg on the fireside rug, and flapped round the room knocking over the jug.* Teacher asks where the hen is and the pupil with the cardboard figure of the hen does the appropriate actions. *The little old lady cried* (Teacher uses a gestural prompt to remind the pupil to lift little old lady) *"what shall I do. It was pokey for one and it's tiny for two. My nose has a tickle and there's no room to sneeze. My house is a squash and a squeeze". And she said.*

Teacher pauses.

Pupils (assisted by teacher): *Wise old man, won't you help me please. My house is a squash and a squeeze.*

The same pattern is repeated until the story is completed. Figure 14 displays some of the teacher-devised resources and the story book used in the lesson. All pupils were engaged in the process and responded appropriately to verbal and gestural prompts used by the teacher.





Figure 14. Curriculum Resources Used to Develop Pupils' Play and Imagination

In School C, pupils engaged in role-play with soft toys through the linking of Drama, Music and SPHE in teaching personal hygiene skills. Pupils were invited to select a body-part from a choice board and supported by the teacher and SNAs in singing “*washing baby bop’s head, washing baby bop’s head, washing, washing, washing, washing, washing baby bop’s head*”. Pupils in School H made flower collages, following the planting of seeds during a SESE lesson. Role play was used successfully in School J to assist a pupil in learning body parts through washing and drying a doll. The findings confirm that children with ASDs display potential for both symbolic and functional play in elicited and purposefully structured contexts (Lewis and Boucher, 1988; 1990). The research findings demonstrate the potential of developing both the play and imagination skills of pupils with ASDs through the curriculum.

### ***Curriculum and Teaching Approaches***

An analysis of video data suggests that all teachers had a knowledge and understanding of curriculum and variously employed common, group and individual pedagogic approaches. The analysis of these data is presented with reference to Knowledge and Understanding of Curriculum, Common Pedagogic Approaches, and Group Pedagogic Approaches. Teachers’ use of individual pedagogic approaches is referred to in the analysis, where relevant, under these headings. A significantly

greater volume of data was available in relation to Music, which emerged in the research as a curriculum area, a common pedagogic approach and as an additional emerging issue. In order to avoid duplication, the analysis of Music in this section combines these three areas and thus comprises a broader analysis than the other common pedagogic approaches.

### ***Knowledge and Understanding of Curriculum***

Table 28 indicates the curriculum areas accessed by pupils during classroom observation, which correspond with the areas of the Primary School Curriculum (NCCA, 1999). All teachers considered that they implemented a curriculum, which was based on the individual needs of each pupil and described by one teacher who had completed the post-graduate certificate programme as *“I do a little bit of everything now. I need to look at my own curriculum and try to adapt that as well”*. A teacher who had not completed the programme similarly remarked *“so I used to say to my staff in America when they came in if you can’t spin on a dime, if you can’t change quickly when things aren’t working for a child and have something, have more than one strategy for a backup, then you really are not going to be successful. If you can’t see that tiny little step you are not going to survive here because you are going to get frustrated”*. Similar to the findings in relation to teachers’ prior professional experiences identified at the Antecedent Level, teachers’ ITE and curriculum-specific CPD were evident in their knowledge of curriculum.

Teachers were confident in their knowledge of curriculum as evidenced in the words of one teacher who stated that *“if there is anything I can take from the curriculum I use it and I bend it and I twist it”*. Another teacher remarked that *“I had years in the mainstream setting and I had worked at different levels as well in the primary school, I had that basis. So then when I had to take the curriculum and present it to severe to profound, yes you have to think far wider and a lot more preparation goes into it. But having the basics of the general curriculum did help me enormously. Whereas I think if I went into it raw not knowing that, that would be a very difficult thing”*. Five teachers stated that they found the Curriculum Guidelines for Teachers of Students with General Learning Disabilities useful in mediating the curriculum and two teachers considered that they were unwieldy in terms of being *“too heavy to trawl*

*through in order to find what I feel is specific to me.*” One of the five teachers believed that the guidelines constituted a separate curriculum for teachers of pupils with special educational needs.

<b>Table 28. Curriculum Areas Accessed</b>	
<b>School A</b>	English Mathematics Social, Personal and Health Education
<b>School B</b>	English Mathematics Social, Personal and Health Education
<b>School C</b>	English Social, Personal and Health Education Social, Environmental and Scientific Education Physical Education
<b>School D</b>	Music
<b>School E</b>	English Social, Environmental and Scientific Education Physical Education.
<b>School F</b>	English Social, Environmental and Scientific Education Physical Education
<b>School G</b>	English Mathematics Social, Personal and Health Education Social, Environmental and Scientific Education
<b>School H</b>	English Drama Visual Arts Social, Environmental and Scientific Education
<b>School I</b>	Social, Environmental and Scientific Education
<b>School J</b>	English Mathematics Social, Personal and Health Education

The research findings suggest that the principles of the Primary School Curriculum concerning the uniqueness of each child, ensuring the development of the child’s full potential, the role of the environment, guided activity, experiential and discovery learning, the developmental nature of learning, the centrality of language and the

cultivation of the social, emotional and aesthetic dimensions have direct applicability to the learning and teaching of pupils with ASDs (NCCA, 1999). However the lack of curriculum guidelines for teachers in the junior classes was criticised, with one teacher remarking that, *“I would find it hard to be deciding to put in all these strands and things. They would wreck my head as opposed to knowing what I am doing and why I am doing it”*. It is noteworthy that the other eight teachers were satisfied that the curriculum could be planned and mediated appropriately for pupils in their classes. These findings preceded the recently developed Early Childhood Curriculum Framework incorporating the themes of well-being, identity and belonging, communicating, exploring and thinking, which may have the potential to assist teachers in the junior classes (NCCA, 2009). One teacher articulated the difficulty of planning appropriate curriculum programmes for second-level pupils and suggested that guidelines and materials should be made available to assist teachers in this area. This reflects the findings of Parsons et al. (2009) where they observed that the educational needs of older children tend to be relatively neglected in the research.

The concept of education as a cultural entitlement where culturally valued knowledge and skills are transmitted and the concept of education as therapeutic in addressing the specific needs stemming from ASDs can be identified as features of teachers’ practice from the research findings (Council of Europe, 2009b). Similarities between the concept of curriculum articulated by Jordan (2005) were evident in that teachers mediated common curricular goals, content and contexts through an understanding of group and individual differences. It was evident that teachers’ directed attention towards promoting pupils’ holistic development within the context of the principles outlined above. Jordan’s suggestion that pupils’ with ASDs are entitled to a broad and relevant but not necessarily balanced curriculum was not articulated by the research participants. Teachers’ interpretation of curriculum in the research study is linked to the concept of curriculum in the Irish context rather than the “broad” and “relevant” concepts articulated by Jordan.

### ***Common Pedagogic Approaches***

The literature review relates common pedagogic approaches to effective pedagogy in general and identifies principles of effective instruction that are common to all

learners (Lewis and Norwich, 2000). These principles are based on what is deemed to generally constitute effective teaching (Porter and Ashdown, 2002). I identified the common pedagogic approaches used by teachers with reference to these principles of effective instruction and analysed the video data to determine their use by individual teachers. The common pedagogic approaches adopted by individual teachers are illustrated at Table 29 below. Incidental teaching is not to be equated with a strategy of ABA but refers to occasions when the pupil's attention is directed towards topics not directly related to the objectives of the lesson. The teacher then uses these opportunities to further extend the pupil's learning. Activity learning is concerned with a planned process where the pupil's learning is embedded in a specific activity and is linked to Piaget's theory that learning should be supported by action (Pound, 2005). Constructivist learning refers to the manner in which the learner is enabled to construct knowledge and understanding from the experience created by the teacher and is linked to the learning theories of Piaget and Vygotsky (Pound). Experiential learning is learning that is based on the pupil's direct experiences (Dewey, 1938).

### ***Common Pedagogic Approaches –Clarity in the Learning and Teaching Process***

While maintaining clarity throughout the learning and teaching process is important for all pupils, the communication deficit of the triad of impairments and the differences in auditory processing renders it critical for pupils with ASDs (Williams, 1993; Grandin, 1995; DES, 2001). Clarity of purpose in introducing lessons was demonstrated by nine teachers in the use of clear verbal and/or visual instructions augmented with physical and gestural prompting. Examples of clear verbal instructions and modified use of language, which were effective in engaging pupils' attention to their tasks included *"I am going to ask each boy and girl here to name a note"*, *"We are going to throw the dice to start, fish for the card, look at it and tell us what part of the body it is"*, *"First sums, then computer"*, *"We won't do any writing now today because we've done our English writing this morning, we'll keep our writing for Science later"* and *"Open up your work folder, good boy, let's read, first pointing, then shapes, looking, then my choice, good boy. Time for pointing"*. In Schools A and C, the pupils responded to "circle-time" and "good morning" songs in an English lesson through manipulating visual schedules appropriately and remaining seated in the required formation for the lesson. Personalised teacher-devised table

mats were used effectively to indicate lunch-time in School F. See Figure 10 previously for a photograph of these mats.

**Table 29. Common Pedagogic Approaches**

Schools	A	B	C	D	E	F	G	H	I	J
<b>Common Pedagogic Approaches – Clarity in the Learning and Teaching Process</b>										
Clarity of Purpose	√		√	√	√	√	√	√	√	√
Teacher Modelling	√	√	√	√	√	√	√	√	√	√
Clear Presentation of Lesson	√		√	√	√	√		√	√	√
Teaching in Small Explicit Steps	√		√	√	√	√		√	√	√
Providing Feedback and Monitoring the Pupil's Response	√		√	√	√	√	√	√	√	√
A Consistent and Varied Use of Positive Reinforcement Strategies	√		√	√	√	√	√	√	√	√
Review and Continuity with Previous Learning	√	√	√	√	√	√	√	√	√	√
<b>Common Pedagogic Approaches – Teacher Expectations</b>										
Positive Pupil-Expectations	√		√	√	√	√	√	√	√	√
Monitoring Pupils' Attention to Task	√		√	√	√	√	√	√	√	√
Anticipating Disruptions	√		√	√	√	√	√	√	√	√
<b>Common Pedagogic Approaches Linked to the Primary School Curriculum</b>										
Knowledge of Subject	√	√	√	√	√	√	√	√	√	√
Flexibility and Proficiency in the Choice of Teaching Strategy	√		√	√	√	√	√	√	√	√
Incidental Teaching	√		√	√	√	√		√	√	
Activity Learning	√	√	√	√	√	√	√	√	√	√
Constructivist Learning	√	√	√	√	√	√	√	√	√	√
Experiential Learning	√		√			√	√	√	√	√
Structured Questioning	√		√	√	√	√	√	√	√	√
Talk and Discussion	√		√	√	√	√	√	√	√	√
<b>Common Pedagogic Approaches – Prompting Systems</b>										
Physical Prompts	√	√	√	√	√	√	√	√		√
Verbal Prompts	√	√	√	√	√	√	√	√	√	√
Gestural Prompts	√	√	√	√	√	√	√	√	√	√
Visual Prompts	√	√	√	√	√	√	√	√	√	√
<b>Common Pedagogic Approaches – Music</b>										
Rhymes, Songs and Music	√	√	√	√		√		√		

Elements of teacher modelling were variously used by all teachers to support pupils in understanding verbs, prepositions, body parts, matching tasks, shapes, gluing activities, rhymes, playing the tin whistle slowly and opening a text book correctly. The clear presentation of lessons and teaching in small explicit steps were features of the practice of five teachers who had completed the post-graduate certificate programme and three teachers who had not. The start of the lessons was marked by pupils' attention being directed to a class visual timetable and/or individual schedules and augmented in Schools A and C by the singing of familiar songs. Five teachers who had completed the post-graduate certificate programme and four who had not provided feedback to pupils and monitored pupils' responses and attention to their tasks. A consistent and varied use of positive reinforcement strategies was used by all of these teachers in providing feedback to pupils. Positive reinforcement refers to the contingent presentation of a stimulus, following a response that increases the probability of the response occurring in the future (Alberto and Troutman, 2006). The literature identifies reinforcement as a positive component of learning and teaching for pupils with ASDs (Grandin, 1995; Sallows and Gropner, 2005). All nine teachers used the social reinforcers of words, phrases and proximity to affirm pupils' responses. Teachers used an animated and enthusiastic tone. Expressions used included "yes", "good boy", "very good", "well done", "thank you" and "fantastic". Eight teachers also used expressions, which directly referred to the task being done such as "you're doing such good waiting", "brilliant work", "very nice, that was beautiful playing", "good counting", "good waiting" and "very nice talking". The following is an excerpt from the video data in School F, which demonstrates the use of positive reinforcement.

Teacher: *Look at all the work he has done for Mrs. X this morning. He's on number 3. And he did his handwriting. Isn't that lovely.*

Researcher: *Very good handwriting.*

Teacher: *He was being very silly this morning, because when I asked him to write his name up there. He wrote. Tell her what you wrote.*

Pupil: *S-P-O-T.*

Researcher: *Would that be Spot. Spot. Have you a dog called Spot?*

Pupil: (Shakes head to indicate "no").

- Teacher: *And then he was teasing me and he decided he'd write "happy" and I said maybe you're feeling happy and then he decided to write his name. Tell her how to spell your name. **Pause** Spell it for me.*
- Pupil: *J-O-H-N*
- Teacher: *Isn't he a good boy.*
- Researcher: *Well done.*
- Teacher: *And this has really helped him with his handwriting because he didn't like handwriting when he came here. He couldn't read his own writing. Now he knows some letters have legs and some have arms that go up to the sky. **(Pupil simultaneously starts to write letters on side margins of completed worksheet – teacher allows pupil to complete letters and gently takes sheet)** Thank you John.*

This teacher also used generalised reinforcers where pupils were required to earn a number of tokens daily for a surprise, which could be a desired activity or privilege. The teacher in School F used edible reinforcers for pupils' completion of individual tasks. Activities that had been identified as being of interest to pupils were interspersed on their individual schedules by all ten teachers. While the teacher in School B used some social reinforcers such as "*yes, well done*" when a pupil recited a rhyme, this practice occurred infrequently and was ineffective as high levels of off-task behaviour continued to occur.

All teachers engaged to varying extents in review and continuity with previous learning. This approach has the potential to contextualise learning and mitigate the difficulties experienced by pupils with ASDs in recalling past memories and experiences unless cued or prompted by associative stimuli (Jordan and Powell, 1995; Bogdashina, 2003). Photographs of pupils were used to review pupils' knowledge of themselves and assist in continuity through recognising siblings in School A and selecting their own photograph from one of three in School C. Revision of rhymes previously learned was used in School B prior to teaching new rhymes and in School F to consolidate the recognition and naming of body parts. A visual representation of a tin-whistle with notes clearly marked was used to revise individual notes prior to pupils playing tunes in School D. In Schools G and H, SESE



was situated in familiar contexts through linking the planting of seeds to previously related activities. The teacher elicited the pupil's previously acquired knowledge of the character in a reading book prior to engaging in a formal reading lesson in School E. The following excerpt from the video data in School I demonstrates the contribution that a review of pupils' learning can make to the consolidation of knowledge. This dialogue took place during a History lesson, where the pupil was required to think of something that he could do that would show he was Irish.

Teacher: *What about a story. Is there any story that we did that you could tell someone and they'd know you were Irish. **Pause** Do you remember the stories we did before our break, the Irish stories. **Pause** Do you remember about the hurley and the sliotar and the dog? **Pause***

Pupil: *Setanta.*

Teacher: *Very good Setanta. Like wouldn't that be a nice story to tell people, the story of Setanta. Because people in different parts of the world, would they know that story?*

Pupil: *No.*

Teacher: *And it's an Irish story. Is there any other story you could tell them? **Pause***

Pupil: *Fionn Mac Cumhaill and the Salmon of Knowledge.*

Teacher: *Very good. Fionn Mac Cumhaill and the Salmon of Knowledge. Anyone else I know you know.*

Pupil: *Tír na nÓg*

Teacher: *Tír na nÓg, Tír na nÓg. Excellent.*

In School J, previously acquired concepts were interspersed with new learning objectives in a sequence of pointing activities designed to lead the pupil to recognise objects in the classroom environment.

### ***Common Pedagogic Approaches – Teacher Expectations***

The role of positive teacher expectations in optimising pupils' learning is well documented in the literature (Snell and Brown, 2006). Positive pupil-expectations, monitoring pupils' attention to task and anticipating disruptions were evident in the

practice of five teachers who had completed the post-graduate certificate programme and four who had not. In School A, a pupil indicated a reluctance to engage in a circle-time activity through shuffling on the chair to indicate refusal, the teacher successfully introduced choice and asked “*do you want to pass this time?*”. Pupils’ attention was consistently directed to a prominently displayed visual schedule in School C to remind pupils of the morning’s activities. Pupils’ attention was redirected towards their task through repeating the instruction “*stand in circle*” in School E, where pupils had to burst bubbles blown by another pupil and remain in the space in a circle drawn on the floor. This strategy was also used in School G where the pupil continued to verbalise “*computer*” and the teacher repeated “*first your sums and then the computer*”. Prolonged pauses were used in School F to secure pupils’ attention. In School H, pupils were variously asked to wait, listen or sit appropriately. A pupil in School I displayed a tendency to interrupt the lesson and recount his experiences in an effusive manner, the teacher responded calmly with reduced language such as acknowledging that “*It’s very dangerous*” or indicated listening through facial expression and continued with the lesson. A gestural prompt through the use of a gentle tap on the cheek was used by the teacher in School J augmented by the word “*looking*” to redirect the pupil to his visual schedule. The negative impact of directing inadequate attention to monitoring pupils’ behaviour was evident in School B, where two pupils remained sitting with their legs on the chairs, two manipulated toys unrelated to the lesson and one pupil was spinning an object at the beginning of the lesson. While these behaviours did not always result in off-task behaviour, they appeared to reduce pupils’ attention to, and interest in the lesson. Manipulating antecedent events constitutes a proactive and effective approach to managing pupils’ behaviour (Ernsperger, 2002; Alberto and Troutman, 2006). Pupils’ attention was diminishing in School A and the teacher used an action rhyme successfully to re-engage pupils’ attention. Pupils recited the following rhyme assisted by the teacher and performed appropriate actions:

*“Stand up. Sit down.*

*Stand up. Sit down.*

*Stand up. Turn around.*

*Stamp your feet. Sit down”.*

In School C, the pupil left the room accompanied by two SNAs, following completion of a desk-top activity, to engage in physical activity. This pupil's behaviour was being closely monitored in order to pre-empt incidences of challenging behaviour occurring. The teacher in School D responded to an offer by a pupil to play a tune that had already been played and stated that *"okay, you can play that and you might play another one later"*. Pupils carried portable visual schedules throughout the day in School E and the teacher referred them to the schedules at any indication of off-task behaviour occurring. The teacher in School F sat between two pupils to avoid a disturbance emerging from the close proximity of the two pupils to each other and as she sat down asked *"John, can I sit here please?"*. A pupil in School G had been taught to ask the SNA for help when going over to the computer as he had difficulty in untangling the wires of the earphones. In School H, the teacher provided a communication board with symbols of required objects and a sentence strip, which successfully enabled a pupil with hearing impairment and a pupil with poor receptive language skills to ask for objects during a seed-planting activity. A pupil sat on a swivel chair prior to the lesson and the teacher in School I asked courteously *"Mark, could you sit on your own chair please, good man?"*. The SNA in School F had a chew toy ready and responded swiftly when the pupil started to bite himself by placing the chew toy in his mouth. Where antecedent events that lead to disruptions are not attended to, pupils' attention to their required task may be compromised. In School B, a pupil was asked to participate in reciting rhymes while spinning an object. The pupil continued to spin the object throughout the lesson and did not engage with the required task.

### ***Common Pedagogic Approaches Linked to the Primary School Curriculum***

All teachers demonstrated a knowledge of the subject they were teaching and flexibility and proficiency in the choice of teaching approach were demonstrated by five of the teachers who had completed the post-graduate certificate programme and four teachers who had not completed the programme. Fifteen pupils with ASDs, aged six to fourteen years, cited staff being knowledgeable about their subject and being prepared for lessons as among the characteristics they valued in creating positive school environments (Williams and Hanke, 2007).

The emphasis of the Primary School Curriculum on encouraging the child to be an active agent in his/her own learning through promoting activity, talk and discussion, experiential and guided discovery were evident in teachers' practice (NCCA, 1999). The effectiveness of these pedagogic approaches with pupils with ASDs was linked to teachers' mediation based on an understanding of group and individual pedagogic needs (Jordan, 2005). Incidental teaching was used by teachers in Schools, A, C, D, E, F, H and I. A pupil in School D commented "*it's a solo*" as another pupil played a tune and the teacher affirmed "*it's a solo, that's true*". At the beginning of the lesson in School E a pupil asked the teacher what did sharks do and the teacher answered that "*they have big teeth and can eat people if they go for a swim*". At the end of the lesson the pupil, pointed out to another pupil, without being prompted that "*sharks can eat people*". In School A, the teacher stated "*Cormac is helping Jane*" as Jane was placing photographs on the board. During lunch-time, this teacher asked each pupil "*what do you have for your lunch*" and on receiving a reply sang "*yummy, yummy, yummy, Peter will have orange in his tummy and feels like eating more*" and adapted the words for individual pupils. Constructivist and activity learning were a feature of all teachers' practice. Teachers constructed learning opportunities through purposefully structuring tasks, providing relevant resources and adapting the environment to enable pupils to engage with the learning task. All teachers incorporated a range of activities designed to actively engage pupils in the learning. In School A, pupils removed cardboard figures of monkeys from a velcro board, did the requisite actions and recited:

*"Six little monkeys jumping on the bed,  
One fell off and bumped his head.  
Mammy called the doctor and the doctor said  
"No more monkeys jumping on the bed"  
Five little monkeys (Repeat as above)."*

A cloth was used in School C to teach "bye-bye" through covering pupils and "hello" by removing the cloth. Pupils in School D played the tin-whistle during the teaching of Music. Activities related to matching and sorting with pictures and symbols were used in Schools E and H. Pupils enthusiastically participated in board games in

Schools F and I and planted seeds in Schools F and G. Wooden shapes were used in the teaching of Mathematics in School J. Three of the teachers who had completed the post-graduate certificate programme and four who had not incorporated pupils' experiences in the learning and teaching. Pupils recognised themselves, each other, each others' mothers and siblings in School A through selecting the photographs when instructed by the teacher. Pupils in School C recognised their own and their peers' photographs. The language experience approach to reading was used in School G and a pupil read the following aloud:

*"Today is Friday 16<sup>th</sup> March 2007. We walked to the shops this morning. And I bought a new comic called 'Friends'. This afternoon we are having special music and dancing with all the school to celebrate St. Patrick's Day".*

In Schools F and J, pupils pointed to parts of their bodies in lessons on recognising and naming body parts. In School H, pupils were provided with the opportunity to select the music of their choice to play during recess periods from a choice board with symbols for opera, country and western music, rap, classical, island and rock music. In School I, the teacher developed pupils' empathetic understanding through appealing initially to their direct experiences as the excerpt below demonstrates.

Teacher: *Imagine Peter if you won a prize to America and there was a hundred boys and girls from all the other parts of the world going as well. **Pause** Is there anything that you might have that might be the same between you and those other boys and girls? What about if there was a boy from England there who was the same age as you? What would ye have in common? **Pause** Ye might be the same age. **Pause***

Pupil: *Same age.*

Teacher: *Ye might have the same hair colour.*

Pupil: *Might be in the same class.*

Teacher: *Very good, ye might be in the same class. What about hobbies.*

Pupil: *He could like music like me.*

Teacher: *Very good, he could like the same music as you*

Approaches that incorporated structured questioning and talk and discussion were used by five of the teachers who had completed the post-graduate certificate programme and four who had not completed the programme. These approaches were observed to actively engage, elicit responses and maintain on-task behaviours. In School A, a pupil spontaneously remarked in relation to a sensory toy *“I love the feel of it”*, the teacher paused and asked *“what does it feel like to you”* and added *“oh look Mary is smelling it”*, the pupil then commented *“it’s a smelly ball”*. Through the use of repeated instructions, gestural prompting and allowing pupils an extended response time, the potential of these approaches with pupils who had very limited expressive language was demonstrated by the teacher in School C. During an English lesson, a pupil was asked to place *“elephant on plate”*, the pupil responded by continuing to look at and hold the elephant. The teacher repeated the instruction and as the pupil was about to place the elephant on the box, the teacher placed her right hand on the box and pointed with her left hand to the plate, where the pupil then correctly placed the elephant. In response to an instruction to play the Shepherd’s Song, a pupil in School D asked *“why is there sheep in it?”*, the teacher responded *“because a shepherd is a person who minds sheep”*, the pupil then asked *“any cows?”* and the teacher answered *“I wouldn’t think the shepherd would have any cows, just sheep I think”*. As a pupil in School E hesitated in categorising a shark as being able to swim the teacher asked *“can a shark swim?”* and the pupil answered *“yes”*, while simultaneously placing the picture of the shark on the correct side of the sheet of paper. In School F, the pupil asked *“can I do the word search?”* and the teacher answered *“if you read all the words for me first”*. The pupil read then *“shy”* as *“sly”*, the teacher pronounced *“sly”* correctly twice and asked *“do you understand shy?”*, the pupil responded *“yeah, it means you’re a bit afraid”* and the teacher responded *“a bit afraid, very good, you were shy when the visitors came into the room first, weren’t you?”*. The following discussion in relation to bull running in School I demonstrates the use of talk and discussion and structured questioning during a History lesson in developing pupils’ empathetic understanding. The teacher also used a photograph of a bull-run during the lesson.

Teacher: *In July in Pampalona in Spain, they have bull-runs in the street.*

Pupil 1: *Bull-runs?*

Teacher: *Bull-runs do you think that's very safe?*

Pupil 1: *No it's not, because bulls go like this* (mimes action of charging bull)

Teacher: *They do. See the bull-runs James. (teacher addresses this question to Pupil 2) Would you like to have all those bulls running behind you?*

Pupil 2: *No.*

Teacher: *No I don't think so – imagine running down the town with all those bulls behind you. Would you be scared?*

Pupil 2: *No.*

Teacher: *I'd be terrified. This is a big festival (addresses Pupil 3 and shows him the photograph) in July.*

Pupil 2: *I'd wear a red colour.*

Teacher: *Would you?*

Pupil 2: *Yes to make the bulls go past.*

Teacher: *Yes well they say that bulls like the colour red and that if you wear the colour red the bull will run at you because they like red.*

Pupil 1: *For some reason they attack the red but are they colour blind to other colours?*

Teacher: *They are, they are colour blind.*

Pupil 1: *Why do they attack the red?*

Teacher: *They don't really attack the red, it's just because they can see something moving in front of them. They can't see the colour. That's just a myth really.*

In School J, the teacher discussed with a pupil how to wash a doll by instructing him that he needed to get the doll and the brush and showed him photographs of himself washing and drying the doll. The pupil indicated understanding through listening and looking at the photographs and subsequently engaging appropriately in the activity. This pupil had very poor receptive language skills and was only beginning to initiate conversations using single words.

### ***Common Pedagogic Approaches – Prompting Systems***

Prompting systems provide scaffolding for pupils' learning and can be linked to the zone of proximal development suggested by Vygotsky (1978). The adult adopts a

directive, supportive and facilitating role in order to optimise learning for the pupil (Osborne, 2003). Dickson et al. (1993) describe scaffolded instruction as “the systematic sequencing of prompted content, materials, tasks, and teacher and peer support to optimise learning” (p.12). Larkin (2001) suggests that carefully scaffolded instruction contributes to pupils’ learning and independence. All teachers used a range of physical, gestural, visual and verbal prompting systems to support pupils’ learning. Physical prompting involved guided hand-over-hand actions by the teachers or SNAs. These actions included removing cards from visual schedules, completing hand-writing tasks, placing objects in required positions, selecting from choice boards, assisting with manual signing system, directing a pupil’s finger to the correct note on the tin-whistle, holding a utensil for blowing bubbles, passing objects during a game to promote appropriate turn-taking skills and holding a magnifying glass to view a plan. Gestural prompting included the teacher placing her finger on her mouth as a signal for pupils to listen to a tape, pointing to pupils during “Hello Song”, assisting pupils in selecting correct object during activities, augmenting the teaching of body parts and pointing to cards and finish boxes on visual schedules. Verbal prompts such as “*give it to Cormac*”, “*John’s turn*”, “*sitting*”, “*ready to listen*”, “*check schedule*”, “*gently*” (in relation to blowing bubbles and playing the tin-whistle) and “*looking*” were used by all teachers and were characterised by a reduced and clear use of language. Visual prompts included the use of photographs, computer-generated symbols, teacher-devised charts and resources, commercial resources, computer programmes, three dimensional objects and concrete mathematical materials.

In School C, the teacher used the Lámh manual signing system throughout activities. The Lámh system is a standardised signing system with 500 signs based on Irish Sign Language, which was developed in Ireland for individuals with general learning disabilities and communication needs. Speech is used to augment the signs and only key words in the sentence are signed (Lámh, 2009). Pupils were supported through physical prompting by the teacher and SNAs in the signs for “hello” and “goodbye”. While pupils appeared to understand the signs, they were not observed to initiate communication using these signs. This finding confirms the findings of the literature review that similar communication difficulties occur with signing as with speech



(Dockrell and Messer, 1999). However pupils demonstrated high levels of on-task behaviour, which may have been related to their understanding of activities and this understanding may have been augmented by the use of the manual signing system (Jordan, 1985; Jordan and Powell, 1995; Jordan et al., 1998; Tissot and Evans, 2003).

### ***Common Pedagogic Approaches - Music***

While Music was taught formally by only one teacher, rhymes, songs and music were variously used by five of the teachers who had completed the post-graduate certificate programme and one who had not. In Schools A, F and H rhymes and songs were used specifically to promote pupils' on-task behaviour. In School A, the teacher signalled transition through singing "*circle-time, circle-time, circle-time*". In School F, the teacher supported the pupils in singing a rhyme related to body parts to redirect pupils' attention to naming and recognising body parts from photographs. In School H, pupils selected their choice of music to be played daily while they were eating lunch from a choice board with symbols of different music genres. This created a predictable and controlled environment for pupils. In Schools A, B and C rhymes and songs were incorporated successfully into the curriculum area of Language and Communication. As illustrated in Table 30, an analysis of the melodies used by the teacher in School A suggests that the teacher used short, repetitive, predictive and uncomplicated melodies. The teacher also used different melodies for each activity. Observation of the video data indicated that these melodies were effectively used to signal transitions, augment curriculum delivery, redirect pupils' attention to their respective tasks and give instructions.

In School C, Music was integrated with PE through the pupils responding appropriately to the actions in the following song by being verbally and physically prompted by the teacher and SNAs:

*"Shake the piece of paper up and down.*

*Shake the piece of paper with one hand.*

*Shake the piece of paper with two hands.*

*Blow the piece of paper, blow, blow, blow.*

*Put the paper on the floor, stamp, stamp, stamp.*

*March on the paper, march, march, march.*

*Slide the piece of paper with one foot.*

*Crumble the piece of all in a ball.*

*Crumble the piece of paper in the waste basket".*

Table 30. Analysis of Melodies

**Circle Time**

Musical notation for 'Circle Time' in 3/4 time, consisting of three identical phrases. Each phrase starts with a quarter rest, followed by a quarter note, an eighth note, and a quarter note. The lyrics 'CIR - CLE TIME' are written below the notes.

**Days of the Week / There are Seven Days**

Musical notation for the first line of 'Days of the Week' in 3/4 time, consisting of a sequence of quarter notes.

THERE ARE SEVEN DAYS, THERE ARE SEVEN DAYS THERE ARE SEVEN DAYS IN A  
 MON - DAY TUES - DAY WEDNES - DAY THURS - DAY FRI - DAY SATUR - DAY SU - N -  
 TODAY IS \_\_\_ - DAY TODAY IS \_\_\_ - DAY WE ARE ON THE NE - W

Musical notation for the second line of 'Days of the Week' in 3/4 time, consisting of a sequence of quarter notes.

WEEK THERE ARE SEVEN DAYS THERE ARE SEVEN DAYS THERE ARE SEVEN DAYS IN A  
 DAY MON - DAY TUES - DAY WEDNES - DAY THURS - DAY FRI - DAY SATUR - DAY SU - N -  
 DAY TODAY IS \_\_\_ - DAY TODAY IS \_\_\_ - DAY WE ARE ON THE NE - W

Musical notation for the third line of 'Days of the Week' in 3/4 time, consisting of a sequence of quarter notes.

WEEK  
 DAY.  
 DAY.

**Roll Call/ Hello Song**

Musical notation for the first line of 'Hello Song' in 3/4 time, consisting of a sequence of quarter notes.

HEL - LO \_\_\_ - HEL - LO \_\_\_ - WE'RE GLAD YOU CAME TO - DAY

Musical notation for the second line of 'Hello Song' in 3/4 time, consisting of a sequence of quarter notes.

ON THE BLUE DAY WEDNES - DAY.

In School D, pupils played a range of tunes on the tin-whistle as soloists, in groups and as a whole class, while simultaneously reading the music from prominently displayed sheets. The teacher noted that it “*even thrilled me when I saw them doing it*”. One of these pupils was successfully included in a mainstream class for the curriculum area of Music and when I went to observe the pupil in the class I was

unable to establish where the pupil with ASD was in the class. In the interview data, the value of music was specifically referred to by a number of participants, without being prompted by the researcher. One teacher described the possibilities for pupils with ASDs in accessing the Music curriculum at a level appropriate to their needs and abilities. Two teachers described two pupils as initially not liking Music but through gradual immersion in the Music curriculum, the pupils eventually responded positively. Two principals in schools where teachers had completed the post-graduate certificate programme referred specifically to the value of the Music curriculum for the pupils in the classes. One principal had arranged for fundraising activities in order to employ a visiting teacher to teach Music and recounted that *“one of the children in actual fact in his second lesson started to play tunes on the keyboard on his own”*. The other principal became involved directly in teaching Music to the pupils in the junior class on a team-teaching basis. He described the guitar as an ideal instrument since *“you are interacting and you can play chords with one hand and the children themselves can play the strings with other hand, so they don’t need any skills”*. He concluded that *“they don’t have to tell you they love it, you can see it in their eyes, it is unbelievable”*.

Kanner (1943) referred to musical preoccupations in six of the eleven children he described. He noted that four children had memorised musical compositions and in some cases were able to name the compositions and their composers. One child was reported to be able to discriminate between eighteen symphonies and identify composers by his second birthday. Heaton and Allen (2009) observe that while Kanner’s early description of autism has been hugely influential clinically, the significance and implications of his observations with regard to music have been largely neglected. The Qualifications, Curriculum and Assessment Authority for Wales (2000) advise that many pupils with ASDs show some disposition towards music, which can be fused as a subject in itself and to enhance learning in other curriculum areas. Specific reference is made to the potential of music to signal a clear start and finish to activities and transitions within lessons and to nurture empathy and recognition of feelings. The role of musical instruments in developing interaction, turn-taking, fine motor, co-ordination and sequencing skills is also referred to. Research conducted by Kern et al. (2007) evaluated the effects of individualised

songs on the independent behaviours of two three-year old children with ASDs during the morning school entry routine. Findings indicated that songs assisted the pupils entering the classroom, greeting the teacher and/or peers and engaging in play. The song also appeared to stimulate peers' interest in interacting with the pupils with ASDs. Rhythmic entrainment was observed to impact positively on the head jerking and screaming behaviours of an eleven-year old pupil with ASD (Orr et al., 1998). Rhythmic entrainment consists of playing metered music at fifty to sixty beats per minute, which is the range that reflects the average number of beats per minute of a relaxed heart beat. These rhythms are specifically designed to re-entrain the body to its natural rhythmic patterns. Songs have also been used successfully to augment the use of social stories for pupils with ASDs (Brownell, 2002; Pasiali, 2004). Based on her experience working with pupils with ASDs, Curry (2005) developed recordings for teachers based on short, repetitive, predictive and uncomplicated melodies similar to those being used by the teacher in School A. Heaton et al. (1999) demonstrated that children with ASD engaged affectively with music and were able to pair schematic representations of happy and sad faces with extracts of music in major and minor keys. Research by Allen et al. (2009) with twelve high-functioning adults with ASDs showed that most participants engaged with music for a wide range of purposes in the cognitive, emotional and social domains, including mood management, personal development and social inclusion. Two participants in the group seemed to have restricted levels of musical understanding and further research was deemed necessary to ascertain with certainty how prevalent this may be. The majority considered music to be of value in achieving improvements in mood and for improving personal and social integration. The findings of this research study and the small scale research referred to suggests that the use of music appears to have a positive effective on the learning of pupils with ASDs and can be successfully incorporated into their education programmes. This is commensurate with the experiences of individuals with ASDs. Williams (1993) refers to enjoying singing, classical music and composing dances from an early age and recounts that when all else failed to engage her, music always succeeded in eliciting a response. Williams suggests that singing assists in the acquisition of speech because the words are embedded in the pattern of the music. Grandin (1995) also describes experiencing

deeper spiritual engagement when there is organ music playing in a church. A similar experience was reported by an adult with ASD who noted that:

I hear a lot of music in church, I go on Sunday and Monday and Thursday as a rule ... you can relate to it, sometimes if you're not at that church, if the same song comes along sung by a different congregation, you can relate, it makes you feel a part of something (Allen et al., 2009, p. 27).

The benefits of music have been powerfully captured in the poem "Appreciation" by Craig Romkema (2002), an individual with ASD in the words "music is the regulator of my nervous system, the shelter for my frazzled mind" (p.60).

The findings in relation to teachers' use of common pedagogic approaches can be linked to findings identified at the Antecedent Level that ITE programmes provided teachers with a wide range of relevant skills that assisted them in meeting the needs of pupils with ASDs. However it is also clear that these approaches were mediated through an understanding of group and individual differences and confirms that additional teacher training is essential in order to effect appropriate mediation (Jordan, 2005). While this finding highlights the importance of programmes of CPD focusing on affirming the role of common pedagogic approaches, it also underlines the criticality of teachers accessing ASD-specific CPD.

### ***Group Pedagogic Approaches***

All teachers demonstrated a clear understanding of the importance of adopting a counter-intuitive approach to meeting the learning and teaching needs of pupils with ASDs, described by one teacher who had completed the post-graduate certificate programme as "*working with children with autism, it turns your teaching completely on its head. I think it improves your teaching an awful lot as well. Because it makes you self-examine as to why things are not working*". Various elements of ASD-specific group pedagogic approaches were used by all teachers as illustrated in Table 31. No teacher used one group-pedagogic approach exclusively to the exclusion of others.

**Table 31. Autistic Spectrum Disorder-Group Pedagogic Approaches Used**

Schools	A	B	C	D	E	F	G	H	I	J
TEACCH	√	√	√	√	√	√	√	√	√	√
Communicative Approaches	√	√	√	√	√	√	√	√	√	√
Interactive Approaches	√	√	√	√	√	√	√	√	√	√
Behavioural Approaches					√	√				√
Social Responsiveness	√	√	√	√	√	√	√	√	√	√

**Group Pedagogic Approaches – TEACCH**

The TEACCH approach was affirmed by all teachers and the CPD teachers had accessed commended in relation to its focus on practical activities that were linked to a readily accessible theoretical framework. The words of one teacher were representative of the view of all teachers when she stated that:

*“I think the most beneficial of them all now would be the TEACCH course. Those people were so skilled and just broke it down into components and made you take every section by itself. And you know yourself the interactive week where they brought in children. We had to lay out lesson plans for them. Most other things we just listen to words and theory is great, I would recommend that teachers with autism they need to read a certain amount of theory. But what every teacher wants is practical work”.*

All teachers used aspects of the TEACCH approach and the classroom environment, work systems and visual schedules were adapted to different levels of developmental function according to individual needs. All pupils were observed to understand and engage with their work systems appropriately. Individual work stations were also used as teaching areas where pupils’ individual work programmes were implemented. Pupils demonstrated an understanding of their daily routines through responding correctly to their individual schedules and the daily class timetable. An analysis of the classroom observation schedules indicated that the visual learning modality of pupils was similarly considered by both teachers who had completed the

post-graduate certificate programme and those who had not. Five of those who had completed the programme and three who had not always or almost always adopted teaching approaches and strategies that considered the visual learning modality of pupils while one of each category often adopted such teaching approaches and strategies. Pupils appeared to respond positively to the TEACCH approach as suggested by the literature review (Schopler et al., 1995; (Panerai et al., 2002; Hume and Odom, 2007).

### ***Group Pedagogic Approaches – Communicative Approaches***

A range of communicative approaches was used by all teachers. Visual schedules and resources were a feature of all teachers' practice. Pupils' response time was considered and varied in accordance with the needs of the pupils. In School D, where pupils had severe general learning disabilities and ASDs, a prolonged response time was effective in eliciting pupils' responses during a language lesson exploring the use of prepositions, while a shorter response time was sufficient in School I for pupils with mild general learning disabilities and ASDs. In School A, the teacher used rhymes and songs to communicate the start of activities and the pupils were observed to respond accordingly. The PECS was used in Schools B, C, H and J and pupils effectively requested food, preferred activities and objects for planting seeds. Teachers communicated with pupils using reduced requests such as *"put in bin"*, *"flower in bucket"*, *"ready to listen"*, *"sitting"* and *"looking"*. Developmentally-based approaches were expressly referred to by three teachers and the importance of understanding child development was stressed and captured in one teacher's statement, *"you have I suppose the intensive interaction where you get to the level the child is at and I suppose I am looking very much here at a child that is non-verbal, you have no other way into their world you have to speak their language"*. One teacher described using the principles of Marte Meo successfully with her class through providing pupils with the language to describe their actions. This teacher suggested that *"if we can give them the outer language for what is actually happening, what they experience inside, it is meaningful and then it moves on"*. Marte Meo is based on a developmental process that identifies, activates and develops skills to enable and enhance constructive interaction and development (Marte Meo, 2009). The approach emerged from a concern of a parent with a child

with ASD to reformulate professional information in order to make it accessible to parents in a practical way that would enable them to work with their children.

### ***Group Pedagogic Approaches – Interactive Approaches***

The processes related to the care-giver infant interaction that are used in intensive interaction were variously observed in teachers' practices (Nind, 1999; Kellett and Nind, 2003; Nind and Hewett, 2001). Pupils' experiences were scaffolded through the use of prompting systems. Turn-taking was developed through games and activities. Cognisance was taken of timing and pupils' response times were considered. A secure environment was created for pupils' learning to take place. Adults modified their behaviour and language in accordance with pupils' responses. Joint referencing was intrinsic to learning and teaching and teachers engaged in contingency response routines. Imputing intentionality to the pupil was observed in only one case and absence of task was not a feature of practice. However elements of the process were not used specifically to develop communication and sociability but rather as approaches to augment learning in a range of curriculum areas.

Pupils engaged in a free play session in School B, which would have benefitted from a more structured approach as while initially pupils manipulated the toys in an explorative manner, they subsequently engaged in lining-up and spinning objects. Directed play was observed in Schools A,C, E and J. and confirms the research findings that children with ASDs demonstrate potential for both symbolic and functional play in elicited and purposefully structured contexts (Lewis and Boucher, 1988; 1990; Medhurst and Clay, 2008).

### ***Group Pedagogic Approaches – Behavioural Approaches***

All teachers who had completed the post-graduate certificate programme referred to ABA and while the value of the approach was acknowledged, concerns and criticisms in relation to the approach were also evident. Comments such as *"it is a fantastic method but I wouldn't be in favour of doing ABA 100% of the time"*, *"we can't be gathering data about every move because then we take from the human side of the child"*, and *"it works very well if you do it in small doses, like I am doing now with one of my little boys. But you really have to get a variety of other things, you have to build in a variety, my little boy finds it hard to remember numbers and letters*



*and I am doing the numbers with making him write the numbers and count the name and he does it twenty times. It works because I do other things*", indicate teachers' discomfort with the exclusive use of this approach. Only one teacher who had not completed the programme referred to ABA. Four of the six principals in the schools where the teachers had completed the programme and two principals in the schools where teachers had not completed the programme referred to experiencing parental demands for an ABA approach to be adopted in the class. While principals acknowledged the value of the approach, their concerns with the exclusive use of this approach were evident and are encapsulated in the words of one principal *"the ABA is measuring exactly what it's measuring but you can't allow a child's progress and a child's learning to be reduced to the steps that are being measured there is so much more involved as well"*. Another principal referred to the difficulties she experienced with parents contending that their child could label forty items following participation in an ABA programme *"to find there is no comprehension...the kid would say car and not recognise car in another context"*. The level of pressure involved in these demands can be gauged from the words of one principal *"they have heard great things, there is a school down the road with one-on-one ABA, I want my child to be in that situation. So we have to stick to our guns that the model we have is excellent, that there is socialisation, there are six kids, they are really well looked after and that there is expertise"*. In analysing the video data, the use of behavioural approaches was interpreted in accordance with the definition of Baer et al. (1968; 1987) and was considered only if it was applied and effective, used strategies that have been shown to be effective, considered behaviour as functional, demonstrated accountability through data collection and analysis and considered strategies for facilitating stimulus generalisation and response maintenance in developing programmes. As I did not examine data collection and analysis, I established from the interview data whether teachers were using behavioural approaches and related that to the analysis of the video data. Two teachers who had completed the post-graduate certificate programme and one teacher who had not completed the programme stated that they used behavioural approaches. These teachers also had additional post-graduate qualifications in applied behaviour analysis. However Table 29 suggests that strategies used in behavioural approaches are also a feature of common pedagogic approaches. These strategies include teacher modelling, teaching in small

explicit steps, providing feedback and monitoring pupils' responses, monitoring pupils' attention to task, anticipating disruptions, the use of positive reinforcement strategies and prompting systems. This finding indicates that it is possible to incorporate the strategies used in behavioural approaches in naturalistic classroom settings and that these strategies are not incompatible with common pedagogic approaches. An analysis of the video data suggests that teachers adopt these behavioural approaches in accordance with pupils' individual needs and in response to the learning and teaching context. The finding is commensurate with the observations of Unok Marks (2007) who expresses concerns that ABA is too often used to refer to a specific programme rather than a set of teaching practices. The author suggests that ABA should be viewed as a set of evidence-based teaching practices such as reinforcement, systematic teaching, evaluation, shaping and fading strategies and prompting systems. The research findings suggest that conceptualising ABA in terms of a set of evidence-based teaching practices that can be used in naturalistic classroom settings has the potential to challenge the current polemic associated with the exclusive use of ABA as an intervention for pupils with ASDs.

### ***Group Pedagogic Approaches – Social Responsiveness Approaches***

Developing pupils' social responsiveness was considered through strategies such as constructing learning opportunities that promoted turn-taking activities, pupils' awareness of each other and pupil-interaction. While the value of social stories was specifically referred to by three teachers, the specific process of social stories as detailed in the literature review was not observed (Gray, 1994a; Gray and Leigh White, 2002; Blamires, 2001). The use of sign language was referred to by one teacher. Four of the six teachers who had completed the post-graduate certificate programme acknowledged the benefits of inclusion for the pupils while noting that planning and organising inclusion opportunities was a sensitive process. The comfort level of the class teacher, the readiness of the pupil for inclusion, the importance of consulting with parents and the understanding of peers emerged as issues that required addressing in considering inclusion. The four teachers who had not completed the post-graduate programme did not refer to inclusion. However the fact that these teachers were all teaching in special schools may be a factor as inclusion tends to be a concept that is predominantly linked with mainstream schools.

### *Summary*

Level Two is concerned with identifying the cognitive, affective and behavioural learning associated with participating in the post-graduate certificate programme. Affective learning may be linked to the Antecedent Level and Level One. The programme may have contributed to participants' high levels of motivation. However as previously pointed out, it is possible that the high levels of motivation are peculiar to the participants in this research as the teachers who had not completed the programme also demonstrated high levels of motivation. Engaging with parental experiences, exploring the views of individuals with ASDs and the potential of the programme as a stimulus for further learning may also be considered as affective learning outcomes. Cognitive learning was identified as the acquisition of a broad theoretical base related to a knowledge and understanding of ASDs. Teachers who had completed the programme demonstrated a broadly similar knowledge and understanding related to the broad theoretical bases of ASDs as identified in the literature review. In contrast the knowledge and understanding of the teachers who had not completed the programme were related to their prior teaching experiences, the CPD they had accessed and individual epistemological bricolage. All teachers' understanding of the theoretical bases they had acquired differed as expressed by their demonstrated knowledge, understanding and skills and curriculum implementation. Behavioural learning was evident in the manner in which teachers who had completed the programme directed attention to the importance of mitigating the effects of the social deficit of the triad of impairments. It was not possible to demonstrate a correlation between the programme and teachers' behavioural learning as it related to classroom organisation, accommodation of the communication and rigidity and thought behaviours of the triad of impairments, curriculum implementation or the teaching approaches adopted. The research findings highlight the role of common pedagogic approaches in meeting the needs of pupils with ASDs and suggest that while ITE would benefit from further special education input, its contribution to teachers' repertoire of pedagogical knowledge in meeting the needs of pupils with ASDs should not be underestimated. The findings suggest that role of common pedagogic approaches in the learning and teaching of pupils with ASDs should be highlighted in programmes of CPD. All teachers used various elements of ASD-specific group pedagogic approaches and no teacher used one group-pedagogic

approach exclusively to the exclusion of others. The research findings suggest that the pupil-centred philosophy of the Primary School Curriculum may have impacted on teachers' concern to meet pupils' individual needs. The lack of curriculum guidelines for teachers in the junior classes and the difficulty in planning appropriate curriculum programmes for second-level pupils were remarked on.

As I did not examine base-line and subsequent data in relation to each pupil, I cannot conclude that the curriculum being implemented and the approaches being adopted provided sufficient intensity for meaningful progress or which combination of approaches impacted most beneficially on pupils' outcomes. Simpson et al. (2007) advise that effective, data-supported methods implemented by practitioners should not be rejected based on the premise that they do not constitute research-based effective practice, but rather that they should be evaluated based on their impact on pupil-outcome. This concept is commensurate with the proposition that scientific evidence of efficacy assumes a homogenous population and cannot therefore be applied to individuals with ASDs (National Initiative for Autism: Screening and Assessment (NIASA), 2003). As individuals with ASDs present as a heterogeneous group it remains possible that approaches, which have not demonstrated effectiveness across the ASD population, may, nevertheless, be effective in a sub-set of that population. The combination of common, group and individual pedagogic approaches used by teachers in the research implies that rather than debating the merits of particular ASD-group pedagogic approaches, attention should be directed to isolating the elements of approaches that demonstrate greatest efficacy in contributing to pupils' learning outcomes and building a research base to assist practitioners in this area (NIASA, 2003; SIGN, 2007; Simpson et al., 2007; Osborne and Reed, 2008). The finding that a number of strategies used in behavioural approaches were a feature of common pedagogic approaches suggests that a range of common characteristics exist between approaches, which should be isolated and clarified. The approach adopted by all teachers closely resembles that advocated by Shore (2008) in advising that great benefit accrues when professionals are competent in a particular method, have a knowledge of the child's characteristics and are concerned to match the method to the child's needs.

### **Level Three: Organisational Support and Change**

A number of themes related to organisational support and change emerged from the interview data of all participants. As there were no data available with regard to the organisation of provision prior to the teachers engaging in the post-graduate certificate programme, precise levels of organisational change cannot be identified. The research also sought to determine whether a cascade effect at whole-school level could be identified from teachers' participation in the programme. The findings in relation to Organisational Support are presented with reference to the Role of the Principal, Support of Teaching Colleagues, Multi-Disciplinary Support and Special Needs Assistant Support.

#### ***Organisational Support***

Selective coding of interview data in relation to organisational support is detailed in Table 32 below. The analysis of these data is presented under the headings of The Role of the Principal, Support of Teaching Colleagues, Multi-Disciplinary Support and Special Needs Assistants.

#### ***The Role of the Principal***

The literature suggests that principals play a critical role in effecting school improvement (Evans, 1996; Hargreaves and Fullan, 1998). Davis et al. (2005) identified positive school leadership as having a deep understanding of how to support teachers, managing curriculum in a manner that promotes pupils' learning and transforming schools into organisations that foster powerful learning and teaching for all pupils. Research findings suggest that pupils' outcomes improve when school leaders focus on instructional issues, provide support for special education and are committed to providing professional development (Kearns et al., 1998; Benz et al., 2000).

Particular challenges emerged for the principal in relation to provision for pupils with ASDs. An analysis of the data suggests that the establishment of a class for pupils with ASDs contributes significantly to the administrative, management and instructional roles of both administrative and teaching principals.

<b>Table 32. Nature and Frequency of Selective Data Codes related to Organisational Support for Principals and Focus Group Participants</b>	
<b>Principals in Schools Where Teachers had Completed the Post-Graduate Certificate Programme</b>	<b>Principals in Schools Where Teachers had not Completed the Post-Graduate Certificate Programme</b>
<b>Organisational Support (13)</b>	<b>Organisational Support (10)</b>
The Role of the Principal (9)	The Role of the Principal (9)
Motivation (18)	Motivation (13)
Management of Class (90)	Management of Class (14)
School Management (32)	School Management (6)
Initial Establishment of Class (13)	Initial Establishment of Class (4)
Lack of Autistic Spectrum Disorder-Specific Continuing Professional Development (16)	Lack of Autistic Spectrum Disorder-Specific Continuing Professional Development (11)
Autistic Spectrum Disorder-Specific Continuing Professional Development Accessed (5)	Autistic Spectrum Disorder-Specific Continuing Professional Development Accessed (14)
Health Education/Divide (18)	Health Education/Divide (7)
Parents (25)	Parents (30)
Special Needs Assistants (45)	Special Needs Assistants (20)
Support of Department of Education and Science Personnel (6)	
Difficulty in Recruiting Teachers (6)	
Difficulty in Recruiting Special Needs Assistants (1)	
<b>Focus Group Participants in Schools Where Teachers had Completed the Post-Graduate Certificate Programme</b>	<b>Focus-Group Participants in Schools Where Teachers had not Completed the Post-Graduate Certificate Programme</b>
<b>Organisational Support (2)</b>	<b>Organisational Support (1)</b>
Parents (9)	Parents (8)
Special Needs Assistants (14)	

Five of the six principals in schools where teachers had completed the post-graduate programme described negative experiences in relation to the initial establishment of the class. These experiences related to transport arrangements, the provision of multi-disciplinary support, accommodation, enrolment of pupils and lack of knowledge in relation to pupils with ASDs. The sixth principal was in a special school and didn't report experiencing these difficulties. This is to be expected as this principal would

have been familiar with these processes previously. In three of the schools where teachers had not completed the programme, the principals were in special schools for pupils with moderate to severe and profound general learning disabilities and ASDs and had been appointed prior to the establishment of the class. These principals did not report experiencing similar difficulties. The fourth principal of a school for pupils with mild general learning disabilities did report similar issues in addition to the impact of pupils with ASDs on the existing school staff stating that *“now there are issues for teachers. Teachers sometimes look at the unit as a distinct unit and the staffing of that unit as distinct from themselves”*. There had been no dedicated provision for pupils with ASDs in this school prior to the establishment of the class.

The additional dimension to the work of the teaching principal is captured in the words of one of the two teaching principals who remarked that *“when I’m out of my class I’m saying my God I should be inside, when I’m inside I’m saying look at all the issues I have to deal with”*. Administrative tasks included increased paperwork, making and answering telephone calls in relation to the class, sourcing multi-disciplinary support, fundraising, purchasing resources and organising transport and bus-escort schemes. Management duties related to supporting teachers and SNAs, liaising with parents, involvement in enrolment issues, arranging for accommodation and organising the July education programme. One principal commented *“that is the part I find about this particular job, there is so much time spent on the phone”*. Principals in special schools elaborated less on these duties as they were familiar with them in relation to other pupils in the school and were able to consult with colleagues who had knowledge and experience in the area. The principals in special schools were all administrative principals and did not have teaching duties. One principal of a special school noted that *“no more than anything else, you take it in your stride. It is so much different than ten years ago. We work around that ourselves. As part of the deputy principal’s responsibilities. We talk and we talk and we meet together even sometimes just a chat in the corridor, not often don’t get me wrong, on the why, the which and the how”*.

Individual Education Plans, behavior management issues, curriculum and school policy development were cited as comprising principals’ instructional roles. One

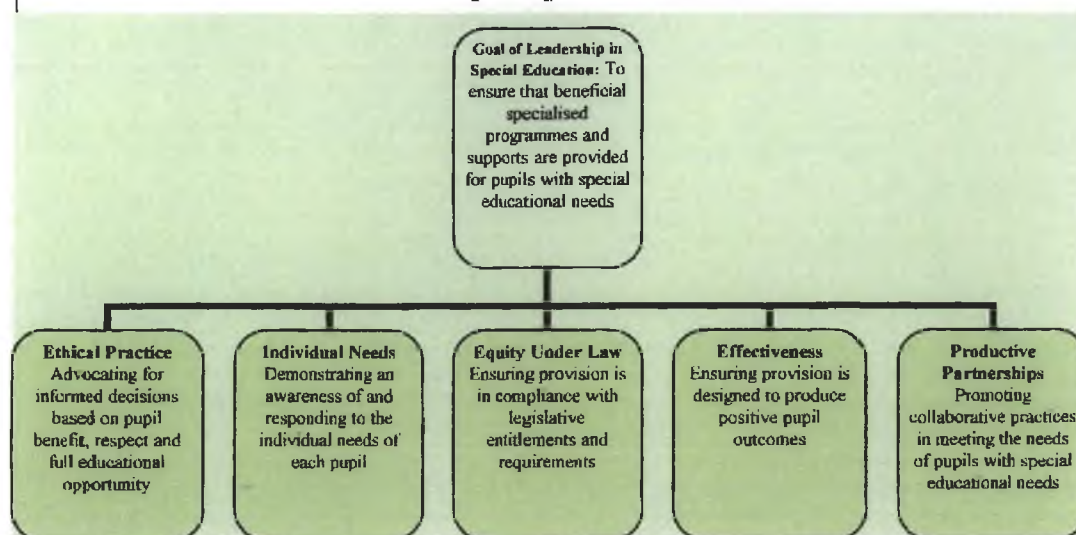
principal in the Dublin area in a mainstream school reported experiencing difficulty recruiting appropriate SNA support. Two principals of mainstream schools in the Dublin area referred to difficulties in recruiting teachers for the classes. Two principals observed what they perceived were inequities in the distribution of resources, whereby some schools were better resourced than others. One of these principals suggested that a pamphlet should issue from the DES outlining the issues involved in the management of the class and detailing the steps involved in eliciting resources. A variety of suggestions was made such as that additional remuneration be paid to principals or the class teachers for the increased duties, greater administrative support be provided or a grant be made available to all schools to source additional support as required. The tension involved in balancing the demands of the class and the demands of the whole school and other pupils with special educational needs included in mainstream classes was evident in data from all principals. Both groups of principals described the frustration they experienced managing the bureaucratic divide that they perceived existed between the respective roles of the DES and the Health Service Executive (HSE) in relation to the provision of multi-disciplinary support and payment for resources such as harnesses and hoists. The involvement of a HSE service in the enrolment policy for three of the mainstream schools also generated additional duties for the principals in liaising with the service. As the service was in the words of one principal *“now not referring children whose IQ doesn't fall within the average or borderline average.”*, which led to the principals having to appease dissatisfied parents. One mainstream principal summarised the issues when he concluded that *“schools are busier places than they were. We are happy to do it and we love our work but the remit has stretched and a whole school evaluation here couldn't investigate the role that I have”*.

Despite the additional duties that are added to the principal's role, interview data indicated that all principals were concerned that teachers were provided with a robust framework to support them in their work. Four principals explicitly referred to their role as instructional leaders in the school. All principals were concerned to promote teachers' CPD and one principal noted *“what I am saying is that it's up to me, every teacher will not go out and do a course after school or at weekends”*. In research conducted by Blase and Blase (2000), teachers identified the promotion of



professional development by principals as an element that had a positive influence on pupils' learning. Of the six principals in schools where teachers had completed the post-graduate certificate programme, three principals had completed CPD related to ASDs and one principal had completed the post-graduate certificate programme. All four principals in schools where teachers had not completed the programme had accessed ASD-specific CPD and one principal had completed the post-graduate certificate programme. Research conducted by Powell and Hyle (1997) concluded that school administrators had limited knowledge of the educational needs of pupils with special educational needs or the relevant legislation, which resulted in misinterpretations of inclusion principles and legislative compliance. These findings are further corroborated by research conducted in nine elementary schools in three school districts in the south eastern US, which demonstrated that a principal's limited instructional knowledge of special education can compromise the delivery of learning and teaching programmes for pupils with special educational needs (Bays and Crockett, 2007). Fifty of sixty-four returned surveys by teachers in the US, following the enactment of Public Law 94-142, which mandated that pupils with special educational needs be accommodated in the least restrictive school environment indicated that teachers perceived the principal as instructional leader in some areas of special education (Bonds and Lindsey, 1992). Teachers perceived the principal as effective in offering suggestions for classroom arrangement, aiding with test interpretation, securing funding, reading professional journals and liaising with parents in relation to Public Law 94-142. Areas for further development were identified as acquainting the teachers with Public Law 94-142, conducting more classroom observations and serving on placement committees. The authors concluded that the leadership of the principal is the determinant of the success or failure of provision for pupils with special educational needs. Crockett (2002) suggests that effective school leaders should be familiar with special education principles in order to ensure that school practices remain grounded in the field's conceptual core. Crockett articulates a framework for leadership preparation in both teaching and administration based on the five core principles of addressing issues of ethics, meeting individual needs, equity, effectiveness and partnerships. Table 33 below provides a summary of these elements and is adapted from Crockett, p. 162.

**Table 33. Leadership Preparation for Special Education**



I concur with Crockett that the elements of this model could be used in designing courses to develop school leaders' knowledge, skills and disposition in providing for legally correct and educationally meaningful learning and teaching for pupils with special educational needs. The elements identified by Crockett reflect findings of research conducted by Male and Male (2001) where a ten percent random sample of special school principals in England identified the need for greater knowledge, understanding and awareness of relevant legislation and the role, structure and function of service providers, skills in people management and skills in curriculum planning and management for pupils with special educational needs. Effective school outcomes for all pupils are generated through creating responsive administrative interventions that support learning and teaching, system-wide progress monitoring and collaborative problem-solving (Boscardin, 2007). While the improvement in the availability of CPD in recent years was acknowledged by all principals, the importance of principals accessing CPD in this area was also stressed.

All principals articulated high levels of commitment to creating effective provision for pupils with ASDs and emerged as responsive leaders committed to providing contexts that support learning for pupils with ASDs (Crockett, 2002). Principals reported spending their own time on fundraising activities, administration duties, reassuring parents and organising CPD for staff. A persistent and determined approach was adopted to securing resources from the DES in order to provide for the

pupils in the classes. An interest in the area of ASDs was evident and principals were eager to share the success stories of individual pupils during the interviews. One principal recounted the following, which was indicative of the experiences in general:

*“I tell you a true story now, John Murphy, John was one of the boys here, John we were told was non-verbal, and Jennifer was my secretary at the time. Jennifer came in and said John is talking, and it was like winning the lotto here. People cried, actually. John went up to twenty words in one week. Things like that keep you going. We had young Mike here, Mike was a little Philipino boy and he was totally wired. He ran riot the first couple of days he came in. He went totally bananas like. That child is now inside, doing extremely well in the mainstream school in town because of the care and work by our team inside. It is things like that will keep you going”.*

This principal referred to the fact that he had been teaching for thirty-two years when the class started and described the establishment of the class as being central to his decision not to retire as it had reignited his interest in learning and teaching. The role of DES officials in supporting principals was affirmed by two principals in mainstream schools and the role of the Inspectorate by one principal in a mainstream school.

Teachers who had completed the post-graduate certificate programme described the in-school support structure available to them in the school in two codes related to the role of the principal and school contexts as summarised in Table 34 below. All of the teachers who had completed the programme referred to the support they had received from their school principals. Positive features of this support included being provided with assistance in facilitating the enrolment of pupils in the class, involvement in the organisation of inclusion and reverse inclusion in the school, providing for the dissemination of information with regard to ASDs among other staff in the school, encouraging CPD, developing whole-school approaches and organising fundraising activities. One teacher contrasted her experience of a principal whom she described as not being that supportive with her current principal and stated that *“when the new principal came he just was prepared to do what he was supposed to be doing and I found that a huge support”*.

<b>Table 34. Nature and Frequency of Selective Data Codes related to Organisational Support and Change for Teachers</b>	
<b>Teachers who had Completed the Post-Graduate Certificate Programme</b>	<b>Teachers who had not Completed the Post-Graduate Certificate Programme</b>
<b>Organisational Support and Change (6)</b>	<b>Organisational Support and Change (6)</b>
Role of the Principal (16)	Role of the Principal (3)
Availability of Multi-disciplinary Support (32)	Availability of Multi-disciplinary Support (5)
Management of Special Needs Assistant-Support (26)	Management of Special Needs Assistant-Support (19)
A Clear Understanding of the Role of the Special Needs Assistant (10)	A Clear Understanding of the Role of the Special Needs Assistant (13)
Training for Special Needs Assistants (10)	Training for Special Needs Assistants (2)
School Contexts (4)	
	Teaching Colleagues (4)

The role of the principal featured less in the interview data of the teachers who had not completed the post-graduate certificate programme and was referred to only by two teachers. The teachers described receiving support from the principal and seeking advice in relation to difficulties that might arise in the class. It is not possible to determine whether participation in the post-graduate certificate programme contributed to cultivating in-school support and created a cascade effect on these schools or whether these schools had previously well-developed in-school support structures.

### ***Support of Teaching Colleagues***

The five teachers in mainstream schools who had completed the post-graduate certificate programme referred to the importance of having a school context that provided support from individual class teachers when organising inclusion for pupils with ASDs and their non-ASD peers. One teacher referred to the challenge of not being viewed by other staff members as *“the nutty teacher”*. Two teachers who had not completed the programme referred to receiving support from a colleague in the school. One of these teachers noted that *“some staff would be quite nervous”* in relation to interacting with the pupils with ASDs. One of the teachers in a focus group interview who had not completed the programme referred to her first year’s

teaching in a special school for pupils with ASDs as her “*initial teacher training*”. This highlights the need for whole-school CPD in order to ensure that all teachers acquire a knowledge and understanding of ASDs. This confirms the findings of the Report of the Council of Europe on the Integration and Social Integration of Children and Youth with ASDs that while it is unrealistic to expect all teachers should have extensive expertise in ASDs, each teacher should have sufficient awareness to recognise what they do not know and be in a position to seek advice and support when necessary (Council of Europe, 2009b). The process of providing professional development for other school staff has recently been initiated by the Irish National Teachers Organisation (INTO), the Middletown Centre for Autism and the Special Education Support Service (SESS) (INTO, 2009, SESS, 2009b).

### ***Multi-Disciplinary Support***

The complexity of ASDs and the variety of associated needs requires a multi-disciplinary perspective (National Research Council, 2001a). While there is a lack of empirical evidence in the literature with regard to the impact of multi-disciplinary support in ASD educational contexts, prominent expert reports highlight the importance of multi-disciplinary support in meeting pupils’ needs. Effective collaboration with multi-disciplinary personnel is a complex and intricate process, which requires the development of specific skills (Peck and Scarpati, 2004). The SIGN National Clinical Guideline (2007) advises that clinicians should collaborate with educational and other relevant providers to ensure that an accurate description of the child’s level of functioning is obtained. Parsons et al. (2009) refer to the recognition in the literature of the need for all agencies to collaborate effectively in supporting pupils with ASDs and their families. Literature examined in the expert strand of the review conducted by Parsons et al. identifies a need to develop a protocol to formalise joint working at a multi-agency level. The need for an adequate, systematic and co-ordinated multidisciplinary support structure was cited in the Evaluation of Educational Provision for Children with Autistic Spectrum Disorders (DES, 2006a). The Report of the Task Force on Autism suggests that ASD-teacher education programmes should focus on meaningful collaboration with other professionals (DES, 2001).

Table 34 indicates that teachers who had completed the post-graduate certificate programme made a high frequency of references to multi-disciplinary support. All of the teachers who had completed the programme endorsed the role of multi-disciplinary personnel in supporting their work, affirming their practice, listening to challenges that emerge in the class, keeping teachers informed with regard to recent research in the field and also in furthering teachers' CPD. One teacher stated that *"what keeps me going big time is the support I get from the ASD team"*. The contribution of multi-disciplinary staff to practical day-to-day work in the classroom was particularly highlighted. One teacher described this as *"we have the theoretical background, we could all sort that out, but then you actually get hands on help with strategies and that has made a huge difference to daily life as such"*. The potential to learn from other professionals modelling good practice was also referred to and described by one teacher as *"a great opportunity to evaluate my own methodologies and see what I do wrong"*. One teacher out of the six had experienced very poor multi-disciplinary support and stated with reference to the class *"it's a miracle that it has survived this long. It's like starving a little plant"*. The reassurance provided by the availability of multi-disciplinary support in relation to parents was summarised by one teacher *"I need support and I think all teachers are the same. I think some parents just think you should know everything about what you are doing. You know I am not a speech and language therapist. If they ask me a question in respect of language, this is not what I am trained in. I am a teacher, I live with the whole thing, I don't know the facts of say occupational therapy and I never will"*. The collaborative nature of the relationship that exists with the multi-disciplinary team is indicated by comments such as *"they see you working with them"*, *"guiding us"* and *"a good working relationship"*. The four teachers who had not completed the post-graduate certificate programme had limited access to multi-disciplinary support, which was referred to only in five codes. The possibilities inherent in adopting a multi-disciplinary approach were not elaborated on by the four teachers who had not completed the post-graduate programme. These findings suggest that participation in the post-graduate programme may have developed teachers' awareness of the potential contribution and importance of multi-disciplinary support in meeting the needs of pupils with ASDs. However these findings may also be related in part to the

greater availability of multi-disciplinary support in schools where teachers had completed the post-graduate programme.

### ***Special Needs Assistants***

All classes had been allocated SNA-support. Codes related to SNAs emerged in all interview data except the focus group interview data in schools where teachers had not completed the post-graduate certificate programme. Similar issues were evident in respect of both groups of teachers and schools.

All teachers experienced comparable issues in relation to the management of the support. The need to communicate clearly with SNAs was consistently referred to and summarised by one teacher in terms of *“it’s all fine for me to be at the IEP but how to impart that information to the girls who are going to be working with these students so that we are all doing the exact same thing that we are all approaching it correctly”*. Terminology used by teachers was indicative of a tension that required careful consideration in the management of SNA-support. This tension is encapsulated in the words of one teacher who stated *“but it could ruin your classroom if it wasn’t going to work or it could be absolutely brilliant”*. One teacher stated that *“it’s very difficult to get that fine line of not presume and not patronise”*. Three teachers referred to personality differences between themselves and SNAs, which made the management of the support challenging. One teacher remarked that *“an extra pair of hands can be an extra job for me”*. Six references were made by individual teachers to the dilemma they experienced in maintaining a fine balance, a delicate balance, a happy medium, being a friend while maintaining an ability to issue directions and the need for prior preparation in the management of support. One teacher referred to trying to work as a team with the SNAs in the classroom as a major source of difficulty while another stated that she would ask their advice or views all the time. Reference was made to the difficulty experienced by new teaching staff in classes where the SNA-support has been in place prior to their commencing in the class. It was stated that this can be undermining as it may appear to the new staff that they are not as skilled as the existing SNAs. Principals reported issues concerning parental disquiet with the organisation of support, insufficient provision of support in the junior classes, the management of adult relationships in the

classroom and the importance of being aware of the possibility of the pupil becoming over-dependent on adult support. It was noted that clarity in relation to the role is required as it was observed by one principal that *"sometimes boundaries can be breached"*.

The importance of SNAs having a clear understanding of their role was raised. In particular the challenge inherent in ensuring that SNAs maintain a non-teaching role was referred to. One teacher succinctly stated that *"well sometimes they lose the run of themselves, you give them an inch and they take a mile. Sometimes they think they are the teacher and sometimes they will go so far as to...you will find them teaching something and you know they are not supposed to be teaching"*. Difficulties were also identified with some SNAs' understanding of their care duties and one teacher suggested that guidelines should be published outlining the roles and duties of SNAs and described their current contract as *"up in the air"*. The importance of ensuring that SNAs communicate with parents in an appropriate manner was referred to. One teacher related an incident where the SNAs didn't agree with the approach she was adopting to the management of a pupil's behaviour and directly contacted the parents to complain the teacher. The parents subsequently contacted two other parents and the teacher was complained to the school principal.

The role of training in the development of SNA support was referred to by both teachers and principals. One teacher and one principal only suggested the benefits of joint training for teachers and SNAs. This finding is contrary to findings of a study conducted by Logan (2001) who advised that while induction programmes for SNAs were important, research affirmed that in-school joint training of teachers and SNAs was the most effective means of developing a co-operative and collaborative approach. The daily training received by SNAs from teachers was referred to and the need for more training for SNAs in understanding their role and developing their knowledge of the pupils was articulated. There was a sense that this CPD should go beyond the requirements of the role as detailed in Circular 07/02 as the duties being undertaken by SNAs were particular to pupils with ASDs and required an associated understanding of ASDs (DES, 2002b). The different qualifications of SNAs were also referred to. One principal in a school where the teacher had completed the post-



graduate certificate programme suggested that *“so really training cannot be over-emphasised. It is so important. If you want to value people and want to give people information, if you want to make sure they have the proper skills and you want to make sure you have the best for the children, you must have people who are trained inside the classroom”*. A similar suggestion was made by a principal in a school where the teacher had not completed the post-graduate programme who stated that *“you know the Department defines it as care and safety and you know that is true it is care and safety but they also need to understand about how the brain works about how we learn, they need to understand about, you know, use of their own voice, their role, how they antagonise children, how they calm children, you know, maybe lowering their voice using less words, you know understanding that a child has a problem in memory and you know working from we’ll say from the very first thing, observing and recording”*. The need for CPD related to ASD is further encapsulated in another principal’s description of the impact of SNA support on the other class for pupils with ASDs in the school *“...instead of a child climbing over desks or doing something that they shouldn’t be doing they are all working and she [reference to the teacher] does twenty minutes with a child and the SNA continues with the lesson and actually copper fastens or strengthens it”*. As the role of the SNA in this class was not directly observed, it is not possible to comment on the nature of the duties that the principal refers to. However these data point to the danger identified by Giangreco and Broer (2003) where support staff in the US is being asked to assume ever increasing instructional, curricular and behavioural support responsibilities for pupils with special educational needs, which results in pupils with special educational needs receiving education from the least qualified staff rather than from fully certified educators. The findings underline the importance of CPD for SNAs in classes for pupils with ASDs being provided in accordance with their prescribed role. Snell and Janney (2000) observe that in the US direct supervision of paraprofessionals is the responsibility of the special education teacher. The authors suggest that the process for teaching, monitoring and supervising paraprofessionals’ skills needs to be shared between the classroom and special education teacher. Calder and Grieve (2004) identify the skills required in managing other adults working in the classroom as leading and organising, directing, training, coaching, motivating and supervising. The authors, citing Kyriacou (1989), observe that change

happens slowly in teaching and that teachers tend to conceptualise classroom management in terms of maximising learning time, quality of instruction, content and structure of the curriculum and its delivery and the general craft of teaching. The emergence of a supervisory and training role for teachers is one which requires focused attention in CPD programmes in order to ensure that additional support is effectively managed. In view of the concerns that have been expressed in Ireland and internationally with regard to the need for CPD for support staff, the possibilities inherent in developing the teachers' training role in respect of SNAs is one, which could be beneficially explored (Logan, 2001; Riggs, 2001; Carrig, 2004; Elliott, 2004). Riggs refers to the wisdom in the observation of Susan, an elementary school paraprofessional who remarked on the criticality of knowing what to do or what not to do when supporting pupils with special educational needs. The research finding is particularly pertinent in relation to pupils with ASDs where the importance of adopting a consistent approach based on an understanding of ASD is highlighted in the literature.

In one school, one of the focus group participants affirmed the role of the SNA in facilitating the inclusion of the pupil with ASD in the mainstream classes stating that *"I am really just depending on the SNA to tell me how I should behave towards him"*. The dilemma of the SNA seeking guidance from class teachers with no experience of ASDs was referred to by a focus group participant in one school who remarked that *"it's very hard on them, imagine them arriving in and they are looking for guidance from the teachers and very often the teachers have only their own personal experience but nothing formal to offer them so that is a definite gap that needs to be sorted"*. Participants in two focus groups specifically referred to the importance of providing training for SNAs in the area of ASDs.

The findings correspond with the literature review and the effectiveness of support staff in schools being linked to a clear role definition, a collaborative working environment, effective management of support, training of support staff, teacher preparation, and parental involvement (Lorenz, 1998; Rose, 2000; Balshaw and Farrell, 2002; Carrig, 2004; Logan, 2006; Blatchford et al., 2009).

### *Organisational Change*

The presence of the class in the school and the contribution of the teachers in the class to organisational change are explored with reference to Developing Staff's Understanding and Knowledge of Autistic Spectrum Disorders, Facilitating the Development of an Inclusive School Ethos and A Recognition of Teachers' Expertise. Table 35 details the nature and frequency of selective codes related to organisational change for principals and focus group participants.

<b>Table 35. Nature and Frequency of Selective Data Codes related to Organisational Change for Principals and Focus Group Participants in All Schools</b>	
<b>Principals in Schools Where Teachers had Completed the Post-Graduate Certificate Programme</b>	<b>Principals in Schools Where Teachers had not Completed the Post-Graduate Certificate Programme</b>
<b>Organisational Change (4)</b>	<b>Organisational Change (4)</b>
Cascade Effect (33)	Cascade Effect (33)
Acknowledgement of Teachers' Expertise (15)	Acknowledgement of Teachers' Expertise (4)
Inclusion (13)	Inclusion (15)
Collaborative Approach (17)	Collaborative Approach (17)
<b>Focus Group Participants in Schools Where Teachers had Completed the Post-Graduate Certificate Programme</b>	<b>Focus-Group Participants in Schools Where Teachers had not Completed the Post-Graduate Certificate Programme</b>
<b>Organisational Change (3)</b>	<b>Organisational Change (1)</b>
Cascade Effect (33)	Collaborative Approach (2)
Inclusion (29)	
Collaborative Approach (3)	

#### *Developing Staff's Understanding and Knowledge of Autistic Spectrum Disorders*

All principals of the schools in which teachers had completed the post-graduate certificate programme referred to the role of the teachers in developing staff's understanding and knowledge of ASDs in contrast to none of the principals in the four other schools elaborating on this role. This suggests that a cascade effect of participating in the programme may be a valued outcome of participating in the programme. The cascade model is a series of consecutive training that occurs as a result of a previous one and is designed to impart an agreed and consistent body of knowledge, skills and attitudes (Craft, 2000). The author suggests that the model is most appropriate where there is a central message to convey and is less appropriate for professional learning that has a more developmental focus. Hayes (2000) cautions

that the effectiveness of the cascade model depends on strategies that are context sensitive, collaborative and reflexive in the delivery of key messages. The potential contribution of a cascade model of CPD is particularly significant in view of the findings of the literature review related to the importance of all staff working with individuals with ASDs having ASD-specific knowledge and understanding (Jones et al., 2008).

Three principals referred to inputs provided at staff meetings, the purpose of which was succinctly summarised in the words of one principal *“we have worked hard to demystify autism, for staff”*. The understanding and knowledge of principals in relation to ASD was evident in their familiarity with the range of ASD-specific approaches. Two principals specifically affirmed the recommended approach of the DES in relation to the use of a variety of approaches based on the identified individualised needs of each pupil. One principal referred to the teacher’s contribution in terms of *“she would also talk about unlocking each individual child and their potential within them and that is something that teachers don’t really look at, the individualisation of unlocking”*. One principal, who had completed the post-graduate certificate programme prior to the teacher completing it noted that *“I felt empowered because I had that course behind me, I know what is happening out there, I am up to date on what is happening out there. I can bring the most up to date and best methods into the school and present them to the rest of the staff and that is what we did”* and she added that *“I suppose we were in a position to be influential”*. Two principals referred to the role of the class teacher in providing direct on-site CPD for SNAs encapsulated in the words of one principal as *“the SNAs have a very strong role and a very important role. They are working sometimes one-to-one with the children and they are very good and Kate comes back and passes it on”*. This is commensurate with the suggestions in the literature of developing the teachers’ training role in respect of SNAs (Logan, 2001; Riggs, 2001; Carrig, 2004; Elliott, 2004). A principal in a school where the teacher had completed the programme noted that the teacher in the class considered that she would no longer be able to teach a mainstream class and concluded that *“the problem now is that she sees herself in that niche area”*. While this demonstrates the level of expertise the teacher has acquired in relation to teaching pupils with ASDs, it also signals a potential deskilling factor

whereby the teacher's confidence in teaching other pupils may be compromised. This is a factor, which should be considered and addressed where possible through providing opportunities for ASD class teachers to engage in team and co-operative teaching activities with other teachers during reverse inclusion and inclusion activities.

The role of the teachers in the classes for pupils with ASDs in disseminating knowledge to other staff members in schools where teachers had not completed the post-graduate programme was not referred to specifically by principals. Rather principals reported generally on how knowledge was disseminated in the schools. It was reported that existing staff's expertise was used to assist the class teachers, described in the words of one principal as *"I find that the people who have already had the training and had the experience are delighted to share the knowledge"*. Teachers attending other CPD programmes were invited to share their experiences *"another thing I have learnt a lot from, with tribute to Special Education Support Service and the Croke Park course, the girls came back from that and they were full of the sensory integration presentation that (name deleted) had given and it was just interesting how things fall into place then"*. Following this course, the principal organised whole-staff training in the area of sensory integration. Principals also became aware of specific CPD programmes through networking with other principals and organised these for their own staff subsequently. In circumstances where the principals had accessed ASD-specific CPD, they contributed to developing staff's knowledge and understanding as captured in the words of one principal *"yesterday, I should say, I was speaking to one of the other teachers and I said you know you've got to understand that their brain is not working the same way as our brain and that they are frightened by things that aren't frightening because of their disability and you've got to accept their disability"*. One principal noted that *"it would be better for me to send the likes of Sophie or the other girl below on these courses, they can contribute at the forefront"*.

All focus group participants in schools where teachers had completed the post-graduate certificate programme and schools where teachers had not completed the programme demonstrated some awareness of ASDs. One teacher noted that *"because*

*of the Unit there, I think the school is very aware of the whole Autistic Spectrum and in particular with the boys coming in with Asperger's".* The latter refers to the fact that the mainstream teachers had developed an understanding of AS from the experience of the unit in the school and this had assisted in the inclusion of a number of these pupils in mainstream classes. In particular participants referred to the individual needs of all of the pupils. One teacher succinctly remarked that *"I think it was just people got to know these children"*. However focus group participants who had not completed specific CPD programmes themselves did not exhibit an in-depth knowledge of the implications of ASDs for pupils' learning and teaching. One teacher summarised this situation as *"to be completely honest about it I am not sure, there probably are. Bluntly, those different techniques I am not up to speed on"*.

### ***Facilitating the Development of an Inclusive School Ethos***

Parsons et al. (2009) observe that more empirical research is needed regarding the components of an inclusive education for children and young people with ASDs. The authors remark that best practice and policy guidelines provide guidance but point out that there is an absence of collaborative, innovative and authentic research that combines rigour with important qualitative and contextual information from all stakeholders' perspectives. Inclusive education is not a static phenomenon and continues to develop informed by changing policy and legislative environments and the knowledge and experience gained from practice (Kyriazopoulou and Weber, 2009). Hegarty (2001) considers that "inclusion" and "inclusive schools" require a clear specific domain of reference in order to be useful terms and should signify something other than excellence in education or good schools. The author contends that inclusion should be viewed as one of a number of principles that inform educational provision such as equity and respect for others. I concur with the author and interpret an inclusive school ethos for the purpose of this research as one in which there is a concern to include all pupils in the activities of the school regardless of mainstream or special school provision.

Teachers who had completed the post-graduate certificate programme were reported by principals to have contributed to creating an awareness of pupils with ASDs in the school. This suggests that participating in the programme has the potential to

positively impact on whole-school responsiveness to pupils with ASDs. However the manner in which this awareness translated into including pupils in school activities varied among schools. A key factor appeared to be the existence of a mutual professional understanding between the principal and the class teacher. Inclusion presented as being at a more advanced level of development in the four schools where both the principal and class teacher were equally committed to promoting an inclusive school environment. A synchronicity was evident in the interview data of the class teacher and principal in Schools A, B, C, and D. In School A, the teacher reported that *“a new principal came that Christmas and it wasn’t that he wanted to move in and take over, but he just did the job of a principal”*, while the principal observed *“Yes (name of teacher) is key because she and I worked out our system that works. She is King of her Kingdom, or Queen of her Queendom and anything that impinges on me or that she is worried about she comes to me...in other words there is an inclusion aspect here”*. The teacher in School B stated that *“Now we often bring our lads down to (name of principal) class”* and the principal noted *“It has been definitely an enriching experience for me since we started here. But you know who has really been enriched and fulfilled out of it is the rest of the school”*. The teacher in School C remarked in relation to the principal *“I was very taken with how positive she was...”* and the principal observed *“(name of teacher) is one of our star teachers anyway”*. In School D, the teacher described the response of the principal to a boy with AS *“and everyone was ahhhh, bold, bold, bold, bold. So one of the curriculum planning days there, the principal said could we just meet for one hour to talk about this boy. We actually ended up talking for five hours about him. He was a changed child afterwards”* and the principal remarked that *“It was great to use (name of teacher) skill and expertise”*. The interview data from Schools E and F did not demonstrate such synchronicity. In School F the class teacher reported that it was more difficult to promote inclusion activities as the staff was apprehensive. In School E, the principal described the negative experience of trying to promote such activities in terms of *“dying a death”* due to the difficulties in the class teacher communicating with other school staff. The existence of inclusive practices in Schools A, B, C and D was further corroborated by the interviews with the focus group participants. A variety of activities was evident in these schools that included reverse inclusion activities, inclusion of pupils with ASDs in mainstream classes, the involvement of

the principal in teaching music to the class and the sharing of the class teacher's expertise with the resource teacher who subsequently shared this with the relevant mainstream class teacher. One of these principals remarked with regard to the class that *"well I think it has changed the climate of the way we think and we are prepared to experiment and that is what it has done to us"*. A focus group participant in one of these schools remarked that *"I haven't had a lot of training in any of the areas, but if you have a problem, you go to someone else and know that they had the problem before you"*. An analysis of the data suggests that the success of such activities depends on the development of what one principal described as *"a team spirit between the staff in the school"*. A structured collaborative approach was evident in the reported activities of these four schools also. Principals referred to consulting with parents, class teachers, multi-disciplinary personnel and SNAs. The words of one principal summarises the collaborative approach that was in place in these schools *"absolutely, that is what I love here, nobody thinks they are the expert, we are all saying what do you think and it's sharing. We get on really well, with our multi-d as well because we need each other, it's down to that"*. While there was evidence of some collaborative practice in the other two schools, it was of a less structured nature as indicated by the words of one of the focus group participants *"we haven't now, built into our plans any specific time allocation for integration, or procedures or approaches or anything like that. It is done in a very informal way"*.

The positive effects of the class on other pupils in the school were specifically referred to by four out of the five mainstream principals in schools where teachers had completed the post-graduate certificate programme. The essence of these views is captured in the words of one principal who remarked that *"those are the mainstream children and their life, has been enriched. No matter what power points or no matter what interactive boards, or anything you could use, you could not actually get it across to the children unless they experienced it"*. One of the participants in the focus groups referred to the potential difficulties that pupils with ASDs may experience in being included as they may present as being *"bold"* rather than having special educational needs. The teacher observed that *"the other interesting thing was Mark and John. John is down syndrome now, they started together. They were together in infants' class. The other children knew that John was"*



*different and they were kind of accepting of that. In their eyes, Mark was just the bold boy”.*

Principals of the schools where teachers had not completed the post-graduate certificate programme demonstrated an awareness of including pupils with their non-ASD peers for a range of curriculum and leisure activities. This awareness appeared to stem from the relationship between the principal and the whole-school rather than from the principal and the class teacher. A collaborative approach was adopted and there was evidence of an awareness of the importance of consultation and working as a team. One principal of a special school where a class had recently been established remarked that *“I feel that the provision needn’t be entirely separate, that they can be integrated but only for various classes and those classes in which the children are competent in”*. This principal also referred to the fact that *“now there are issues for teachers. Teachers sometimes look at the unit as a distinct unit and the staffing of that unit as distinct from themselves”*. The class teacher in this school also described experiencing isolation from the other teachers in the school on the initial establishment of the class. The special school for pupils with ASDs was involved in an inclusion project with local mainstream schools in order to ensure that the pupils experienced activities with non-ASD peers. The findings confirm the literature regarding the importance of committed school leadership in the development of an inclusive school ethos (Hegarty et al., 1981; Whitaker, 1994; Ireland, 1999; Riehl, 2000).

### ***Acknowledgement of Teachers’ Expertise***

All principals considered that additional CPD was essential in providing for the learning and teaching of pupils with ASDs. All principals of teachers who had completed the post-graduate certificate programme referred to the expertise and experience of the class teachers in fifteen individual codes. Phrases such as *“she works very hard”*, *“it’s great to see Rachel’s skill and expertise”*, *“there are two highly experienced and professional teachers down there. So there is a rhythm”*, *“Emma is one of our star teacher’s anyway”*, *“Margaret is key”*, and *“Jane has an understanding of how the child should be treated”* reflect the different yet congruent views of each of the principals. Only one of the principals of schools where teachers

had not completed the programme referred to the teacher's expertise and experience. This principal referred to the teacher's expertise in a particular approach and noted how this was of assistance to other teachers in the school. Interestingly this principal also referred to a teacher who had previously completed the programme in the same comment stating that "*say that another teacher is concerned about a child and I'd say the best person to ask about that is Zara or Hazel because they have been there before*". These findings suggest that the professional expertise of teachers who have participated in the programme is valued and acknowledged by principals.

### *Summary*

Level Three identified critical issues related to organisational support and change. The administrative, management and instructional duties of school principals, the role of teachers in mainstream classes in supporting the inclusion of pupils with ASDs, the potential contribution of multi-disciplinary support and the importance of effective management of SNAs were identified as key organisational supports. The need for clear directions and support to assist principals at the initial establishment of a class in a school is evident from the research findings. The role of the principal featured extensively in the interview data of the six teachers who had completed the post-graduate certificate programme. It may be that participation in the programme contributes to highlighting the importance of promoting the principal's role in the class. The role of teachers in mainstream classes in supporting the inclusion of pupils with ASDs was identified and suggests that all teachers should access CPD in order to develop a knowledge and understanding of ASDs. Teachers who had completed the programme referred more often to multi-disciplinary support and articulated the possibilities inherent in adopting a multi-disciplinary approach. This suggests that participation in the programme may provide participants with a broad knowledge and understanding of the potential of the impact of multi-disciplinary support on pupils' educational provision. While, it is clear that the role of the SNA is valued in schools and is considered a critical organisational support, challenges in relation to the role were also identified. The importance of clarification both officially and within schools in relation to the roles and responsibilities of SNAs was articulated. The need for further CPD both at initial, induction and inservice levels for teachers in the effective management of SNA-support was referred to. Considerable reference was

made to the necessity of providing SNAs with CPD related to their roles and responsibilities.

The research findings suggest that a cascade effect of engaging in the post-graduate certificate programme is identifiable in relation to the development of staff's understanding and knowledge of ASDs, facilitating the development of an inclusive school ethos and a recognition of teachers' expertise. Teachers who had completed the programme assisted in developing staff's knowledge and understanding of pupils through input at staff meetings, informally and through direct on-site CPD for SNAs. In contrast in schools where teachers had not completed the programme, staff's knowledge and understanding was developed through the use of existing in-school expertise and external CPD providers. It is significant that in the four schools where teachers had not completed the programme, there were other teachers on the staff who had previously completed the programme. These teachers were explicitly referred to as assisting the four research participants. An analysis of the data suggests that participation in the post-graduate programme can potentially contribute to facilitating an inclusive school ethos. Inclusive practices were at a more advanced level of development in schools where both the principal and class teacher appeared to be committed to the process and where structured collaborative planning and activities were a feature of practice. While similar inclusion practices were evident in the schools where teachers had not completed the programme, the success of these activities appeared to be related more to the relationship between the principal and the whole-school rather than the principal and class teacher. The specific references made by principals of teachers who had completed the post-graduate programme to the expertise in the classes suggests that participation in the programme assists in developing teachers' professional credibility in the school.

#### **Level Four: Participants' Use of Knowledge and Skills**

Participants' use of knowledge and skills was considered with reference to the interview, photographic and video data. A number of relevant themes related to teachers' knowledge of the heterogeneous needs of pupils, assessment, individualised planning and liaising with parents emerged for consideration as detailed in Table 36

below. Four identical selective codes were recorded for teachers who had and had not completed the post-graduate certificate programme.

<b>Table 36. Nature and Frequency of Selective Data Codes related to Participants' Use of Knowledge and Skills</b>	
<b>Teachers who had Completed the Post-Graduate Certificate Programme</b>	<b>Teachers who had not Completed the Post-Graduate Certificate Programme</b>
<b>Participants' Use of Knowledge and Skills (4)</b>	<b>Participants' Use of Knowledge and Skills (4)</b>
Heterogeneous Needs (7)	Heterogeneous Needs (10)
Assessment (14)	Assessment (7)
Individual Education Plans (16)	Individual Education Plans (6)
Parents (49)	Parents (24)

### *Heterogeneous Needs*

The heterogeneous needs of pupils with ASDs have been highlighted in the literature review. The combination of the triad of impairments, sensory sensitivities, cognitive functioning, co-occurring special educational needs and family characteristics impacts differently on each individual with ASDs (Parsons et al., 2009). All teachers demonstrated an understanding of the heterogeneous needs of each pupil with ASDs and the concept of autism as a spectrum. One teacher who had completed the post-graduate certificate programme concluded that *“I don't think that anyone could ever fully understand autism because children are so unique. And I even with my qualifications am still finding out new things and learning”*. In particular teachers were aware that individuals with ASDs think in a different way to those who do not have ASDs, which required the teacher to make appropriate adjustments when engaging in learning and teaching. Another teacher who had completed the programme remarked that *“because every child is different and the more I see it, every child is so like their own family as well. They have inherited traits, not just the autistic traits”*. The four teachers who had not completed the programme also demonstrated an understanding of the heterogeneous needs of the pupils whom they were teaching. One teacher described it in terms of:

*“Working with children with autism, yes you are working with children with special needs but their special needs are unique and you have to think about how, they might*

*not have imaginative skills, they might not have social skills, they may not have good communication skills but basically you are treating them as individuals and you are trying to do the best for them to facilitate their needs to bring out the best, to lead independent lives and to have dignity in their lives”.*

It is not possible therefore to identify the development of teachers’ understanding of the heterogeneous needs of pupils with a particular programme of CPD, which they had accessed. This understanding may develop from a combination of individual teachers’ experience and CPD accessed.

### ***Assessment***

The role of assessment is affirmed in the Primary School Curriculum and in the Curriculum Guidelines for Teachers of Students with General Learning Disabilities (National Council for Curriculum and Assessment (NCCA), 1999; 2007). Unlike Britain, there are no statutory requirements laid down for pupil-assessment, however assessment is described as an essential component of successful teaching and learning in the Primary School Curriculum (NCCA, 1999). The four purposes of assessment have been described as formative, diagnostic, summative and evaluative (DES, 2000; Lordan, 2002). Marvin and Tilstone (2002) suggest that formative and summative assessment can be directly linked to learning and teaching. Clarke (2001) considers that while summative assessment is concerned with measurement, formative assessment is the creation of clear learning intentions that are matched to pupils’ attainment and assessing what the pupils know, understand, do or experience in relation to that learning intention. Lordan considers that there are inherent challenges in choosing the most appropriate assessment tools for pupils with ASDs due to the impact of the triad of impairments on pupils’ learning, the scattered developmental pattern and the impact of extraneous factors such as environmental stimuli and general well-being. Research conducted by Black and Williams (1998) concluded that improving learning through assessment is dependent on the provision of effective feedback to pupils, the active involvement of pupils in their own learning, adjusting teaching to take account of the results of assessment, recognising the profound influence of assessment on pupils’ motivation and self-esteem and pupils’ self-assessment practices. The authors describe these five factors as deceptively simple. Table 37 reflects the use of Black and Williams’ four first factors

by individual teachers. There was some evidence of Black and Williams' fifth factor in the use of visual schedules, which provide a means for pupils to self-assess their own progress through their allotted tasks. The analysis of these factors is detailed previously in the section referring to common pedagogic approaches. This finding confirms the concept of assessment as an integral part of the teaching process that is built into the curriculum rather than an attachment to be added on at a later stage (Jordan and Powell, 1995; Byers and Rose, 1996). It also confirms assessment as closely linked to the common pedagogic skills used by teachers. Two teachers who had not completed the post-graduate programme were observed to engage in summative assessment practice during the classroom observation. This assessment was related to the number of words read correctly during a reading lesson and to the number of correct responses to specific requests. Both of these teachers had completed post-graduate programmes in ABA and this recording was linked to discrete-trial training related activities.

**Table 37. Assessment Approaches Used That are Integral to the Teaching Process**

Schools	A	B	C	D	E	F	G	H	I	J
Review and Continuity with Previous Learning	√	√	√	√	√	√	√	√	√	√
Providing Feedback and Monitoring the Pupil's Response	√		√	√	√	√	√	√	√	√
Monitoring Pupils' Attention to Task	√		√	√	√	√	√	√	√	√
Positive Pupil-Expectations	√		√	√	√	√	√	√	√	√
Flexibility and Proficiency in the Choice of Teaching Strategy	√		√	√	√	√	√	√	√	√

The analysis of the interview data related to assessment indicated that all teachers demonstrated an awareness of the importance of assessing, recording and monitoring pupils' progress. The approach articulated to assessment was very individualistic and based on teachers' preferences. The need for further consolidation of teachers' skills in this area was noted by one teacher who had completed the post-graduate certificate programme stating that *"I do think teachers should learn more about assessing*

*children and I feel that is something I don't know a lot about*". A similar statement from a teacher who had not completed the programme noted that *"if I were to pick one area of need as a teacher that I would need to develop, I would definitely say it is assessment"*. One teacher who had not completed the post-graduate programme noted that *"I don't think that you always have to have everything written down. I think the best thing is that you need to get to know the child as an individual and work from there"*. As I deliberately took a decision not to analyse documentation in view of the possible conflict with my role as an inspector, assessment data were not examined during the research. The findings in relation to assessment are therefore limited and reliant only on the video-observation and interview data, which preclude making conclusions in relation to the effectiveness of the assessment practices adopted. However the individualistic approach being currently adopted by teachers and the need articulated for further consolidation of teachers' skills suggests that all teachers would benefit further from accessing CPD in the area of assessment. The link between common pedagogic approaches and formative assessment practices being used by teachers suggest that teachers require affirmation of their skills in this area. This finding is also linked to that of teacher articulation, which is detailed below in emerging issues.

### ***Individualised Planning***

The process of individualised planning can be linked to the concept of group and individual pedagogic needs that have been identified in the literature review (Frankl, 2005; Lewis and Norwich, 2005). Individualised planning supports curriculum access, provides for a continuum of support, identifies progress, facilitates record keeping and assists in creating a structured approach to providing for pupils with special educational needs (Special Education Support Service, 2009b). Tod (1999) acknowledges that while challenges exist in relation to individual education plans (IEPSs), positive features are also evident. Tod cites the promotion of collaborative practice, parental and pupil involvement, a focus on clear educationally relevant targets, evidence for the effectiveness of additional support for pupils with special educational needs and an emphasis on pupils' response to teaching as positive features of the IEP process. Kurtzig (1986) considers that IEPs provide for the possibility of focusing on and nurturing pupils' unique strengths and skills. An IEP can empower teachers and families through explicitly detailing the strategies required

to enable pupils to progress with reference to their identified priority needs, goals and targets (Hagedorn, 2004; Hammond et al., 2006; Jung et al., 2008). According to Byrne (2008) IEPs can be an important tool in identifying and meeting the unique needs of pupils with special educational needs. While Individual Education Plans have a legislative basis in Britain and the US, the sections related to IEPs in the Education for Persons with Special Educational Needs Act, 2004 in Ireland have not been commenced (Friel, 1997; Siegel, 1998, Yell and Drasgow, 2000; Ireland, 2004; McCarthy, 2006). However official reports and court cases in Ireland have articulated the importance of individualised planning for pupils with special educational needs (O'Donoghue v. Minister for Health, 1993; Ireland, 1995; Department of Equality and Law Reform, 1996; Sinnott v. Minister for Education, 2000). The Task Force on Autism advocated for an IEP process based on a contract between the pupil, parents, school and other relevant professions (Department of Education and Science, 2001). Mr. Justice Peart in *O'Cuanacháin v. The Minister for Education and Science* (2007) referred extensively to IEPs in his judgement and concluded that the model of education being provided:

...provides for the involvement of teachers, parents, therapists, educational psychologists and any other professionals dealing with S in any decisions about the specific targets to be aimed at in relation to S's education, and that the menu of interventions included in Model A can be selected from time to time for use as the need is evident. All of this envisages the preparation in conjunction with parents of an Individual Education Plan (O'Cuanacháin v. The Minister for Education and Science, 2007, p.252).

Responses from seventy-six teachers in nineteen special schools for pupils with mild general learning disabilities in Ireland indicates that the majority of teachers considered the IEP process to be useful and that it assisted their teaching (McCarthy, 2006).

Teachers' attitude to planning for individual pupils' learning emerged as a potential differentiating factor between those teachers who had completed the post-graduate certificate programme and those who had not. The four teachers who had not



completed the programme specifically referred to the extra time required in planning for pupils' learning. They described preparation of materials and curriculum planning as *"time consuming"* and *"requiring a lot of energy"*. Two of these teachers referred to doing a lot of work at home. This suggests that the post-graduate certificate programme provides teachers with experiences that enhance their confidence in effecting a practicable approach to planning. This is commensurate with research conducted by McCarthy (2006), which found that less than half of the teachers surveyed considered that they were confident in devising IEPs and only four percent considered that had received adequate training in the area. Conversely research conducted by Nugent (2002) in a special school for pupils with mild general learning disabilities with thirteen teachers found that teachers did not perceive training as a key issue. However Nugent points out that this may be peculiar to this context and cites the group-training, individual and peer support as factors, which appeared to have contributed to teachers' overall satisfaction and confidence.

All teachers who had completed the programme demonstrated an in-depth knowledge of the process of individualised planning. Fourteen references were made to the consultative approach adopted by teachers in involving multi-disciplinary personnel, parents and school principals. Two teachers referred explicitly to including the SNA in the process. The benefits of including parents in the planning process were variously described as directing parents' attention to their children's strengths, informing parents with regard to curriculum, ensuring parents are informed in relation to pupils' priority learning needs and developing a consistent approach between home and school. One teacher summarised the benefits in terms of *"the parents can then contribute and be listened to and have a forum and then everything can be made cohesive into a programme"*. The positive impact of the process on parents is described in one teacher's recall of a particular meeting when she states that *"I remember one Mum crying one time because she couldn't believe there was this many experts in the room. She was crying out of happiness and appreciation. All of us with different training and expertise and we were all talking about her son"*. The issue of the time required for planning meetings was raised by two teachers and the difficulty in organising meetings during the school day mentioned. The approaches adopted by teachers who had not completed the post-graduate programme

indicated that these teachers each adopted different approaches to the process based on individual preferences or the school's approach to the process. A valued outcome of the programme appears to be the development of teachers' knowledge and understanding of planning for individual pupils' learning and teaching. I did not examine teachers' planning in view of the requirements of the DES (1965) in relation to planning and the possible conflict of my role as inspector. The findings in relation to individualised planning are therefore limited by the fact that the interview data were not corroborated by an analysis of documentation. This represents a weakness in the findings, which cannot at this stage be rectified.

### *Parents*

The literature suggests that parents experience an evolving process in dealing with the impact of ASDs on their children and on their lives (Dunlap and Fox, 1999; Webb, 1999; McCarthy, 2008; Trepagnier, 1999). In comparison to other special educational needs, there is no indication at birth that a child has ASD. Parents are unaware of the imminent ASD diagnosis and consider that they have a healthy child who is reaching appropriate developmental milestones. A period of uncertainty follows as manifestations of ASDs emerge and parents wait for confirmation of a diagnosis of ASD. Trepagnier suggests that a diagnosis may be accompanied by relief despite the sadness and anxiety. However the challenges of dealing with a child with ASD remains and parents have to negotiate on a daily basis to ensure that appropriately targeted interventions are being provided for their child (Hutton and Caron, 2005). Analysis of questionnaire data from one hundred and seventy-three questionnaires returned from a sample of parents/carers of children with ASDs in different regions of England highlighted the importance of clear information being available to parents, carers and family members (Jones et al., 2008). Ninety-three percent of parents reported their own reading as a main source of information on ASDs and thirty percent identified school staff as a main information source. Research indicates that parents value information concerning the psycho-educational implications of ASD and report that it impacts positively on their ability to understand their children (Sofronoff et al., 2004).

Dunlap and Fox (1999) observe that the most effective parental support is provided through relationships that are based on trust, commitment and mutual respect. Issues related to communicating with parents featured prominently in the interview data. All teachers demonstrated a knowledge of the impact of children's ASDs on their parents and the need for empathetic understanding when dealing with parents was reiterated with one teacher stating that *"it's not about not telling the truth and not about not giving them the full picture but there are some things that you just can't say"*. Communication was referred to thirty-five times in the codes related to parents and demonstrated teachers' understanding of the importance of communicating regularly and clearly with parents. Comments such as *"it's all about communication really"*, *"letting them (parents) know what is going on and keeping the lines of communication open"*, *"it's an open-door policy, they are more than welcome anytime"* and *"it's working very closely with the parents"* encapsulate the priority teachers gave to developing relationships with parents. Eight teachers expressly referred to the importance of adopting a consistent approach between home and school in order to optimise pupils' progress, which was described by one teacher in terms of *"so if you want them to succeed in education and to succeed in life you have got to have continuity between home and school"*. Two teachers who had completed the post-graduate certificate programme referred to the genetic origin of ASDs in four codes and the importance of considering this when communicating with parents. One teacher noted that *"we are certain of this that some of the parents, will have the trace of Asperger's syndrome and that makes them a little bit different and they are not aware at times how difficult they are being with teachers"*. Three teachers referred to the challenges they experienced from parents who were concerned that an ABA approach be adopted with their children. One teacher described being put through *"terrible grief"* and another stated that *"both of the children's parents wanted ABA, they said it's the only thing that works"*. Seven teachers described the difficulties that stemmed from parents' fear of accepting their children's ASDs. References were made to parents wanting their child to be normal, parents grieving for the child they didn't get and parents being stressed and quite angry when approaching schools. One teacher succinctly stated that *"some people are terribly, terribly angry and some people deny it's there. Some people are constantly looking for the cure"*. The input of one of the post-graduate certificate

programme tutors in developing teachers' understanding of their role in relation to parents was referred to by one teacher who stated that "*we were finding our way as we went and my tutor, used to say, your job is not to counsel the parents*". Two teachers who had not completed the programme and were in their probationary year explicitly referred to issues related to parental involvement. One of the teachers described being very nervous in relation to the management of relationships with parents. Another teacher, who was also in her probationary year recounted experiencing difficulty when the SNA expressed dissatisfaction with her management of a pupil's behaviour to parents.

Twenty-five references to parents were recorded in the interviews of the principals in schools where teachers had completed the post-graduate certificate programme and thirty references in schools where teachers had not completed the programme. All principals empathised with the levels of emotion and stress experienced by parents of pupils with ASDs. Principals' views are encapsulated in the words of one principal who noted that "*I empathise with them, the parents of those children because I think they have those children every day of every week of every year of their lives, we have them for a few hours every day and we can try and do the best we can to help the situation*". Another principal noted that "*It's a very hard battle, parents of children with autism know maybe they just get like that, they get very direct and assertive, stronger than assertive, they get very insistent*". Principals observed that parents experienced difficulties in understanding and accepting the implications of their children's ASDs and cited the importance of communicating clearly with parents and providing them with accurate information. The barriers created by the triad of impairments in developing reciprocal communication between parents and pupils were described by one principal "*I had a lady here a few weeks ago and her little boy is five. She is a very good parent and she is a very loving person, she is giving him stimulation, she is giving him everything and we talked kind of normal like this and at the end she said to me, I can't understand why, I give him so much love and I give him so much and I get nothing back from a point of view of personally*". One principal of a school in which the teacher had completed the post-graduate programme explicitly referred to the teacher's role in providing information for parents. This information related to conveying an understanding of the implications

of ASDs for learning and teaching as explained by the principal *"the parents' acceptance is the biggest problem for a start, I mean the whole area, they were very uneducated, very ignorant, and we all were about what autism was until we got the likes of Jane (refers to the teacher) who had an understanding of how the child should be treated"*. The principal also elaborated the teacher's role in relation to explaining the range of approaches to parents *"initially when we were starting off, she kept on about ABA but Jane was able to tell her about the integrated method, I don't know what they call it"*. Another principal suggested that training should be available for parents to assist them in understanding their children and how best to help them. This principal suggested that parents of older children with ASDs might be involved in delivering this training. Focus-group participants also demonstrated a knowledge and understanding of parents' experiences of accommodating the challenges presented by children with ASDs. One teacher encapsulated the views and remarked that *"you need to be very careful dealing with the parents and experience teaches you how and experience teaches you that any parents of special needs children are very vulnerable and they find acceptance of the problem is extremely difficult and it takes them a lot longer"*. It is not possible to identify the precise impact of the post-graduate programme on teachers' confidence and role in communicating with parents. However the importance of CPD programmes in developing teachers' confidence to address parents' needs in an appropriate manner is critical in view of the Council of Europe's finding that effective partnership between parents and professionals is essential for truly effective education for pupils with ASDs (Council of Europe, 2009b).

### ***Summary***

Level Four relates to participants' use of knowledge and skills. It is not possible to identify precisely the impact of the post-graduate certificate programme on participants' use of knowledge and skills. All research participants demonstrated an understanding of the individual needs of each pupil, the role of assessment, the need for individualised planning and the importance of liaising with parents. There was a sense that all teachers would benefit further from CPD on assessment. The indepth knowledge of the process of individualised planning by teachers who had participated in the post-graduate programme suggests that this may be a valued outcome of

participating in the programme. However this finding is limited by the decision not to examine documentation during the research study.

### **Level Five: On-Task Behaviour**

Individual pupils' levels of on-task behaviour were determined from the video data through a two-minute interval time-sampling process. On-task behaviour was defined as the extent to which pupils were engaged in their respective tasks in an appropriate manner and off-task behaviour was recorded where pupils' behaviour appeared to interfere with task engagement. While on-task behaviour cannot be equated with learning, the on-task pupil and his or her peers are more likely to see and hear important instruction and the teacher is more likely to use instructional strategies associated with increased on task-behaviour (Heward et al., 1996).

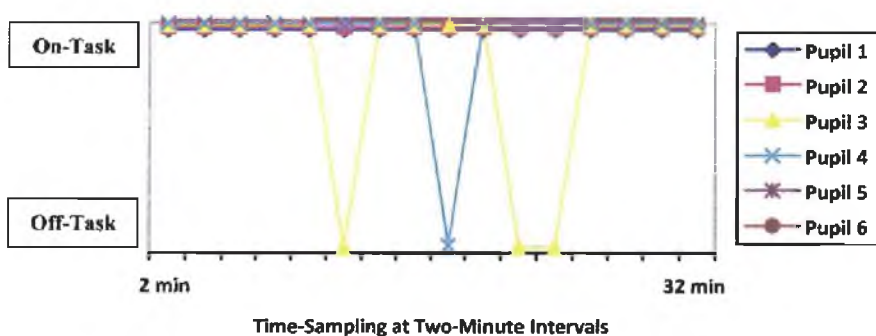
Analysis of the data suggests that the use of common, group and individual pedagogic approaches rather than the programme of professional development accessed were key factors, which appeared to contribute to pupils' on-task behaviour. The findings in relation to pupils' on-task behaviour confirm the criticality of teachers acquiring a knowledge and understanding of effective ASD-specific group pedagogy and applying this with reference to the pedagogic needs of individual pupils (Jordan, 2005). The criticality of providing CPD in ASD referred to in the literature is further highlighted by the findings in relation to pupils' on-task behaviour (DES, 2001; National Research Council, 2001a; Jones et al., 2008).

All teachers used various elements of ASD-specific group pedagogic approaches in maintaining pupils' on-task behaviour and no teacher used one group-pedagogic approach exclusively to the exclusion of others. This reflects the findings of the analysis of the video-data and impacts positively on reliability and dependability. It also suggests that CPD should provide teachers with the knowledge and understanding of a range of approaches to meet the needs of all learners with ASDs. The findings confirm the conclusion of Parsons et al. (2009) that there is currently no evidence that a single intervention or solution will meet the needs of all learners with ASDs.

However this analysis is limited by the heterogeneity of pupils, the lack of specific data on individual pupils, the variety of pupil:teacher ratios, the different levels of SNA-support and the duration of the observation period. Analysis of on-task behaviour is presented through an analysis of the time-sampling of video-data and critical-event data and the quantitative and qualitative analysis of the video observation schedules. A critical event for the purposes of this research is defined as one in which a pupil demonstrates off-task behaviour. Where no off-task behaviour was evident, the critical-event approach was used to identify the teacher’s response to the potential for off-task behaviour occurring. The analysis of the approaches used by teachers is linked to the findings in relation to ASD common and group-pedagogic approaches as detailed previously in Tables 29 and 31.

***Analysis of Time-Sampling of Video-Data and Critical-Event Data***

**Figure 15. On and Off-Task Behaviour of Pupils in School A**

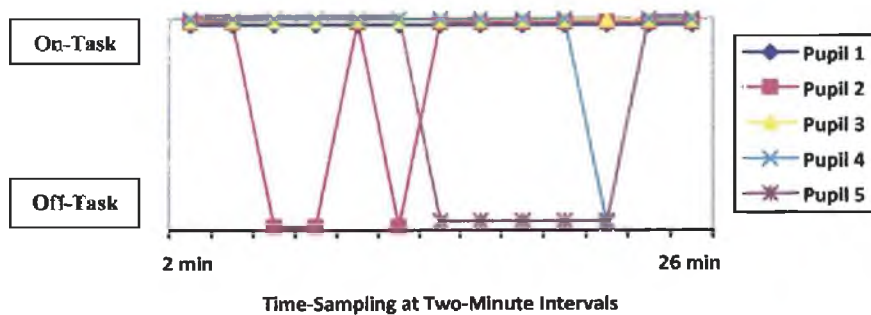


Common pedagogic approaches linked to teacher expectations, prompting systems, music and the Primary School Curriculum were used effectively to redirect pupils’ behavior. Elements of ASD-group pedagogic approaches were also evident in the teacher’s use of TEACCH, communicative, interactive, and social responsiveness approaches to maintaining on-task behaviour, which were informed by a clear theoretical understanding of ASDs. Off-task behaviour was recorded for Pupil 3 in School A at three two-minute intervals. On all three occasions, the pupil remained seated while the class engaged in action rhymes. It was evident from observing the video-data that the pupil had difficulties in remaining seated appropriately and frequently moved around on his chair. This pupil’s behaviour was being closely

monitored by the class teacher and the SNA regularly intervened in an unobtrusive manner throughout the lesson to provide occupational therapy input aimed at mitigating the pupil's sensory needs. Where the pupil began to disengage from a task, the teacher successfully used strategies that included ignoring behaviour where it did not appear to be interfering with on-task behaviour, redirecting attention from the pupil to other pupils, differentiating the learning outcome for the pupil through allowing him to recite the action rhyme while remaining seated and changing activities where it appeared that pupils' attention was becoming less-focused.

Pupils responded enthusiastically to the learning activities being provided. The classroom environment was well-structured and teaching resources, which were not in use were inaccessible to the pupils. Off-task behaviour was recorded for Pupil 4 at one two-minute interval when following the teacher's verbal instruction, the pupil refused to stick a card on the board. The teacher ignored the behavior and repeated the instruction, which the pupil responded to appropriately.

**Figure 16. On and Off-Task Behaviour of Pupils in School B**

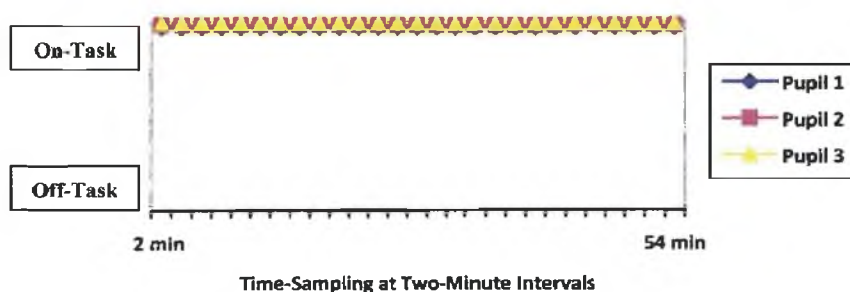


High frequency of off-task behaviour was recorded in School B. The lack of a systematic approach to monitoring indications that a pupil was beginning to disengage from a task, lack of clarity in presenting lessons, persisting with activities where it appeared that pupils' attention was becoming less-focused and inattention to concealing teaching resources that were not in use were factors that appeared to contribute to the high levels of off-task behaviour in School B. This can be linked to the previous findings, which suggested that the teacher did not use the common pedagogic approaches identified in Table 29 during the classroom observation period. While the teacher did use group-ASD approaches, the teachers' practice did



not appear to be sufficiently informed by the theoretical understanding of ASDs, which was demonstrated in the interview data. This is commensurate with research on teachers' CPD where it has been observed that knowledge accessed may not always be translated into practice (Guskey, 2002; Yoon et al., 2007; Chadwick, 2008). Off-task behaviour was recorded for Pupil 2 at three two-minute intervals, for Pupil 4 at one two-minute interval and for Pupil 5 at four two-minute intervals. Pupil 2 was assigned a shape-sorting task at his individual work-station and engaged in a spinning perseverative activity with the shape sorter, which resulted in him not completing the task. At the third two-minute interval, the SNA stopped the shape-sorter from spinning with her hand and asked the pupil to do his work. She left the work-station area and the pupil continued to spin the shape sorter. Pupil 4 slid off the chair under the table at one two-minute interval and refused when asked to come out. The SNA then physically lifted the pupil on to the chair. Pupil 5 had been playing with toys prior to the circle-time activity and was allowed to retain a toy, which he continued to twirl. This appeared to interfere with his engagement in the circle-time activity and when asked by the SNA at the third two-minute interval to participate in the activity through manipulating the choice-board of rhymes that was being passed around, the pupil continued to twirl the toy and began to scream intermittently. This behaviour continued until the fifth two-minute interval when the pupil left the table as a recess period had then been signalled.

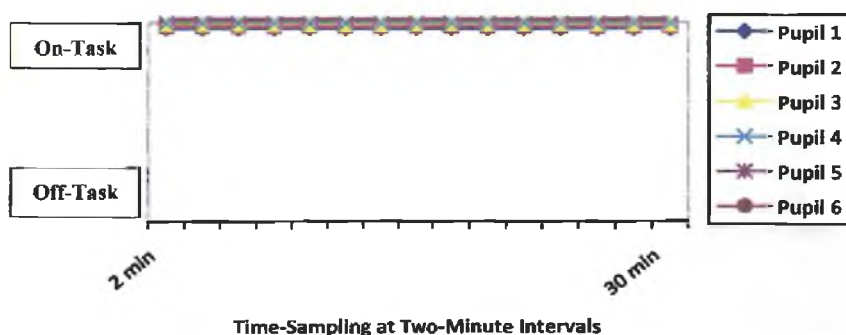
**Figure 17. On and Off-Task Behaviour of Pupils in School C**



No off-task behaviour was recorded for the three pupils in School C. This teacher's practice was consistently informed by the use of common and ASD-group pedagogic approaches, which were implemented based on a theoretical understanding of ASDs.

See Table 29 and 31 previously for further details of this practice. Observation of the video-data suggests that attention was systematically directed to the antecedents of pupils' behaviour. Analysis of the critical-event data confirmed this further as it was clear that while Pupil 1 was remaining on-task, he was getting agitated as demonstrated through increasing vocalisations and stimming behaviours. The SNA gave the pupil toys that were designed to replace the stimming behaviours and supported the pupil in holding the toys appropriately. The use of language was kept to a minimum and the toy was used in teaching the pupil the prepositions "on" and "under" during the subsequent language lesson, which the pupil successfully completed. The pupil was provided with verbal rewards on completion of the task. He continued to engage in stimming behaviours and increased vocalisations and was allowed to leave the room to go to an adjacent activity area accompanied by two SNAs. The pupil returned after a five-minute period and participated appropriately in the final "goodbye" song and activity. The carefully structured classroom environment, and the interest demonstrated by pupils in learning activities appeared to contribute further to pupils' on-task behaviour.

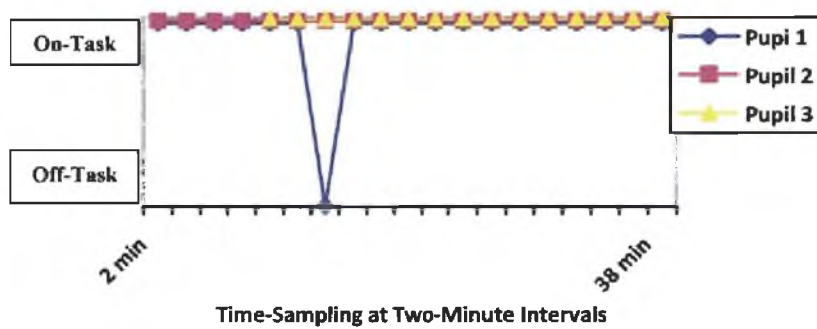
**Figure 18. On and Off-Task Behaviour of Pupils in School D**



Similarly to the teachers' practice in School C there was no off-task behaviour recorded for the six pupils in School D. This teacher's practice was also consistently informed by the use of common and ASD-group pedagogic approaches, which were implemented based on a theoretical understanding of ASDs. This is further corroborated by the data in Table 29 and 31 previously. All pupils remained on task during the video data observed. Analysis of the critical-event data suggests that, where there were indications that a pupil might disengage from a particular task, the

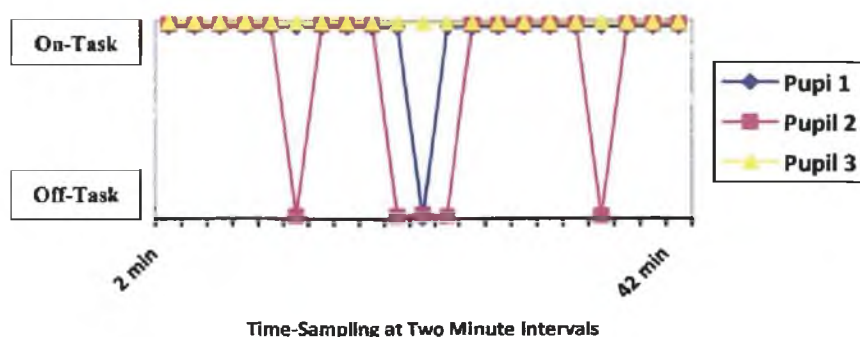
teacher redirected attention to the task. This strategy was similar to that observed in School C. At one point Pupil 1 began to get restless as demonstrated by stretching and moving on his chair during a Music lesson where all pupils were playing the tin-whistle. The teacher ignored the behaviour and asked that everyone “*play together please*”. The pupil re-engaged appropriately with the required task. The classroom environment was carefully structured, pupils accessed resources required for the lesson only and readily engaged in activities.

**Figure 19. On and Off-Task Behaviour for Pupils in School E**



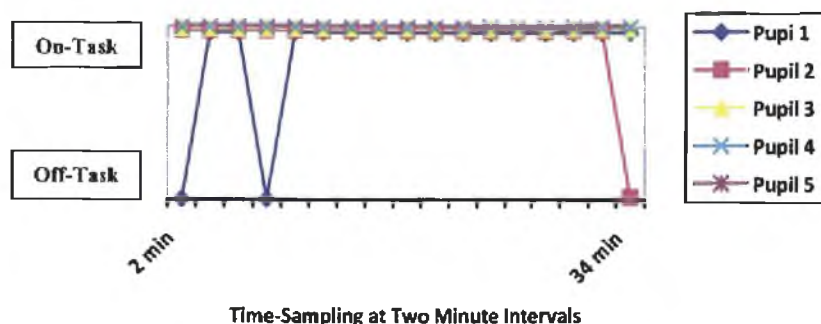
Analysis of classroom observation data previously indicated that the teacher in School E used common and ASD-group pedagogic approaches. The teacher also demonstrated an understanding of the theoretical basis for ASD in her practice. Off-task behaviour was recorded for Pupil 1 in School E at one two-minute interval. Common pedagogic approaches linked to teacher expectations were successfully used to redirect the pupil’s attention to the required task. The pupil appeared restless and left the designated chalk-marked spot on the classroom floor where he was required to remain during a bubble-blowing activity to teach prepositions “up” and “down”. The teacher immediately asked “*Hey, where’s X?*” and Pupil 1 returned to the designated space and re-engaged appropriately with the activity. The creation of a well-structured classroom environment and the provision of activities in which pupils demonstrated an interest appeared to contribute to the on-task behaviour in School E.

**Figure 20. On and Off-Task Behaviour of Pupils in School F**



The teacher in School F demonstrated proficiency in the use of common and ASD-group pedagogic approaches and displayed an understanding of the theoretical basis of ASD during the interview process. However while the pupils were interested in the activities in School F and a well-structured classroom environment was evident, the lack of a more coherent predictable approach to the management of Pupil 2's behaviour and the superfluous use of language in redirecting his attention appeared to contribute to the off-task behaviour recorded for this pupil. This confirms the findings in relation to the teacher in School B that knowledge accessed may not always be translated into practice (Guskey, 2002; Yoon et al., 2007; Chadwick, 2008). Off-task behaviour was recorded for Pupil 1 at one two-minute interval and for Pupil 2 at five two-minute intervals in School F. Pupil 1 jumped up and down and left his seat during a group activity. He returned to his seat when asked to do so by the teacher. The off-task behaviour of Pupil 1 was linked to the off-task behaviour of Pupil 2 who had been provoking Pupil 1 through sticking out his tongue at him at the first three recorded incidences of off-task behaviour. At the fourth incidence of off-task behaviour Pupil 2 screamed "*I don't want to listen*", when asked to do so and the fifth incidence consisted of kicking and screaming while waiting for the other pupils to take their turns. The teacher continued to correct Pupil 2 verbally and advised him that he would not get his surprise and would have to take a break in the quiet room if he continued to persist with this behaviour. The teacher instructed the SNA to accompany the pupil to the the quiet room and the SNA stood up to do so. Pupil 2 stated "*I will be good*", desisted briefly and resumed the off-task behaviour.

**Figure 21. On and Off-Task Behaviour of Pupils in School G**

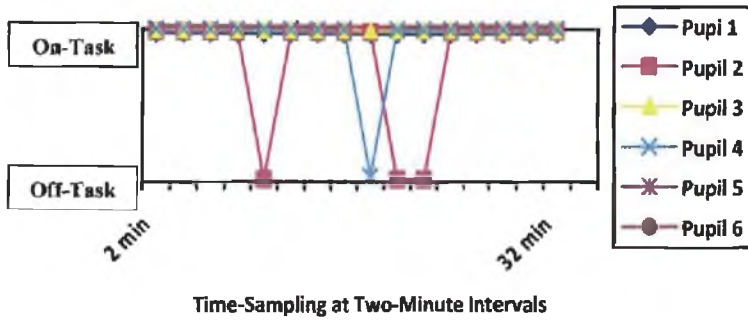


While the teacher used common and ASD-group pedagogic approaches and demonstrated a theoretical understanding of ASDs, analysis of the video-data suggests that greater attention to organising the classroom environment, clearly presenting the lesson through providing distraction-free resources and adopting a more coherent predictable approach to the management of pupils' behaviour would have increased on-task behaviour in School G. Two two-minute intervals of off-task behaviour were recorded for Pupil 1 and one two-minute interval was recorded for Pupil 2. Pupil 1 stated *"I want over there"* to indicate that he wanted to continue on the computer rather than go to his work station for literacy and numeracy tasks. The teacher successfully directed his attention to his task checklist and stated *"first reading, then computer"*. At the second incidence of off-task behaviour, Pupil 1 discovered that the answers to the addition operations were on the back of the task cards and insisted on copying the answers rather than doing the number operations using plastic bricks and continued to do so despite the SNA's requests to complete the tasks appropriately. Pupil 2 ignored the teacher's direction to tidy up, left the group tidying-up activity and returned to his work station where he engaged in perseverative behaviours through shaking a box of coins and twirling pieces of his jumper.

While off-task behaviour was recorded for two pupils in School H, the use of effective strategies by the teacher was successful in redirecting pupils' attention to their tasks. Practice similar to the teacher in School A was observed and common pedagogic approaches linked to teacher expectations, prompting systems, and the Primary School Curriculum were used effectively to redirect pupils' behavior.

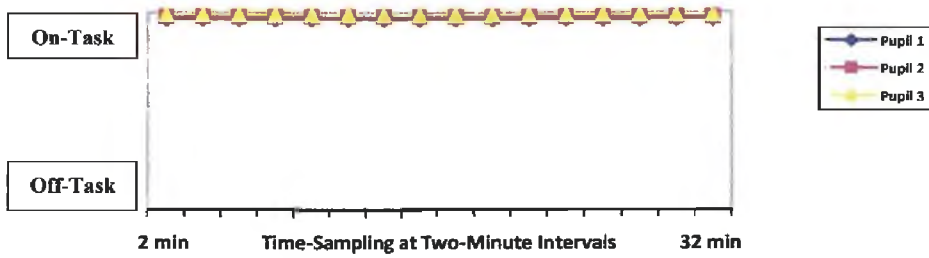
Elements of ASD-group pedagogic approaches were also evident in the teacher's use of elements of TEACCH, communicative, interactive, and social responsiveness approaches to maintaining on-task behaviour, which were informed by a clear theoretical understanding of ASDs.

**Figure 22. On and Off-Task Behaviour of Pupils in School H**



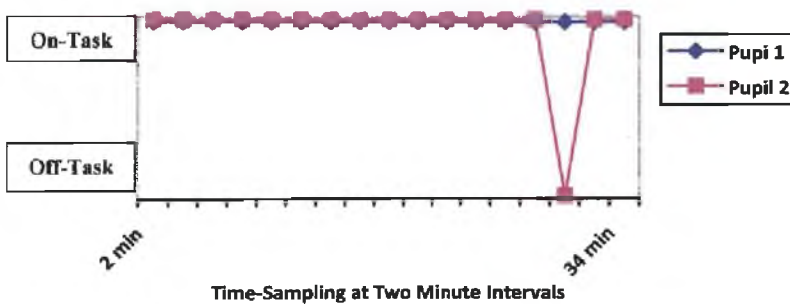
Similar to the teacher in School A, where a pupil began to disengage from a task, the teacher used strategies that included ignoring behaviour where it did not appear to be interfering with on-task behaviour, redirecting attention from the pupil to other pupils, differentiating the learning outcome for the pupil through providing alternative resources, carefully structuring the classroom environment and organising teaching resources. Pupils appeared to demonstrate an interest in the activities, which were provided. Three two-minute intervals of off-task behaviour were recorded for Pupil 2 and one for Pupil 4. At the first two-minute interval, Pupil 2 began flapping her hands, the teacher asked her to name the parts of the plant from the computer screen, the pupil continued with hand-flapping and the teacher successfully re-engaged the pupil through presenting her with a two-dimensional model of a plant. At the second and third intervals, Pupil 2 engaged in perseverative behaviour with a spade in a bowl of soil and ignored the teacher's request to cover seeds with the soil. The teacher removed the bowl for approximately one minute, returned the bowl and asked the pupil again to cover the seeds with the soil. The pupil did as requested. Pupil 4 retrieved his tub of seeds, placed it on his desk and began to walk around the group-table instead of sitting down. The teacher instructed him to sit down and he did so.

**Figure 23. On and Off-Task Behaviour of Pupils in School I**



No incidence of off-task behavior was recorded for the three pupils in School I and pupils remained on-task during the observation of the video data. Similar to School D and C, an analysis of the critical-event data suggests the teacher redirected attention to the task where there were indications that off-task behavior might occur. The use of common and ASD-group pedagogic approaches, which were implemented based on a theoretical understanding of ASDs informed this teacher's practice. At one point Pupil 1 began to get excited with regard to his own interests and verbalise profusely in relation to a holiday he had been on, which was unrelated to the task the class was engaged in. The teacher used minimal language and calmly thanked the pupil for his contribution while successfully redirecting his attention to the reading task. A well-structured classroom environment was created, resources were purposefully organised and pupils willingly engaged in the learning activities provided.

**Figure 24. On and Off-Task Behaviour of Pupils in School J**



While off-task behaviour was recorded for one pupil in School J, the use of effective strategies by the teacher was successful in redirecting pupils' attention to their tasks. This teacher's practice was similar to the teachers' in School A and I and common pedagogic approaches linked to teacher expectations, prompting systems, and the Primary School Curriculum were used effectively to redirect pupils' behavior.

Elements of ASD-group pedagogic approaches were also evident in the teacher's use of elements of TEACCH, communicative, interactive, social responsiveness and behavioural approaches to maintaining on-task behaviour, which were informed by a clear theoretical understanding of ASDs. One two-minute interval of off-task behaviour was recorded for Pupil 2, who during a group-activity to develop hand-eye co-ordination bit his hand and threw the teaching resource on the ground. The SNA intervened swiftly and inserted a chewing toy in the pupil's mouth. The teacher reassembled the teaching resource and avoided eye-contact and the use of language. The pupil re-engaged with the task appropriately. The classroom environment was carefully structured, pupils appeared interested in learning activities, a coherent and predictable approach to the management of behaviour was evident and resources were systematically stored.

#### *Analysis of Video Observation Schedules*

As illustrated in Table 38, direct similarities were evident in the quantitative analysis of the video observation schedules between the rating scales that were allocated to the effective management of pupils' behaviour, pupils' active engagement in meaningful learning activities, the promotion of independent learning, the use of behaviour management strategies that considered the implications of the triad of impairments and the availability and appropriate use of a wide range of learning and teaching resources.

The provision of intrinsically appealing structured learning and teaching activities in which pupils demonstrated interest was observed to significantly increase pupils' responsivity and task engagement. These activities were augmented by the use of stimulating and attractive resources. Experiential resources that utilised photographs of pupils, family members and school staff were particularly effective. A range of toys related to construction, domestic utensils and furniture, cause and effect, jigsaws and games was used successfully to engage pupils' attention.



**Table 38. Direct Similarities in the Quantitative Analysis of the Video Data**

<b>1= never/almost never; 2=rarely; 3=sometimes; 4=often; 5=always or almost always</b>									
<b>Pupils' behaviour in effectively managed.</b>									
School A	School B	School C	School D	School E	School F	School G	School H	School I	School J
5	3	5	5	5	4	3	5	5	5
<b>Pupils are actively and meaningfully engaged in learning activities.</b>									
School A	School B	School C	School D	School E	School F	School G	School H	School I	School J
5	3	5	5	5	4	3	5	5	5
<b>Independent learning is promoted.</b>									
School A	School B	School C	School D	School E	School F	School G	School H	School I	School J
5	3	5	5	5	4	3	5	5	5
<b>Strategies for the management of pupil s' behaviour consider the implications of the triad of impairments.</b>									
School A	School B	School C	School D	School E	School F	School G	School H	School I	School J
5	3	5	5	5	4	3	5	5	5
<b>A wide range of appropriate learning and teaching resources is available and is used appropriately.</b>									
School A	School B	School C	School D	School E	School F	School G	School H	School I	School J
5	3	5	5	5	4	3	5	5	5

Pupils also demonstrated high levels of interest in selected puppets, dolls and soft toys. Information and communication technology and video was effective when carefully selected in accordance with pupils' identified levels of interest and ability. Similarly in the time-sampling analysis of the video data, pupils remained on-task when they appeared interested in the learning activities provided both in group and individual learning contexts. Strategies for the management of pupils' behaviour that considered the implications of the triad of impairments included the use of a clear and reduced language of instruction, supporting the pupil in understanding the rules of social behaviour, using visual material and/or signing and signalling transitions and changes in routine (Jordan, 1985; Jordan and Powell, 1995; Jordan, 1999; Jordan, 2001; Autism Working Group, 2002a; Autism Working Group, 2002b; NAS, 2002). See Figure 25 below where solid lines are used to indicate the direct similarity between the factors identified as contributing to the effective management of pupils' behaviour.

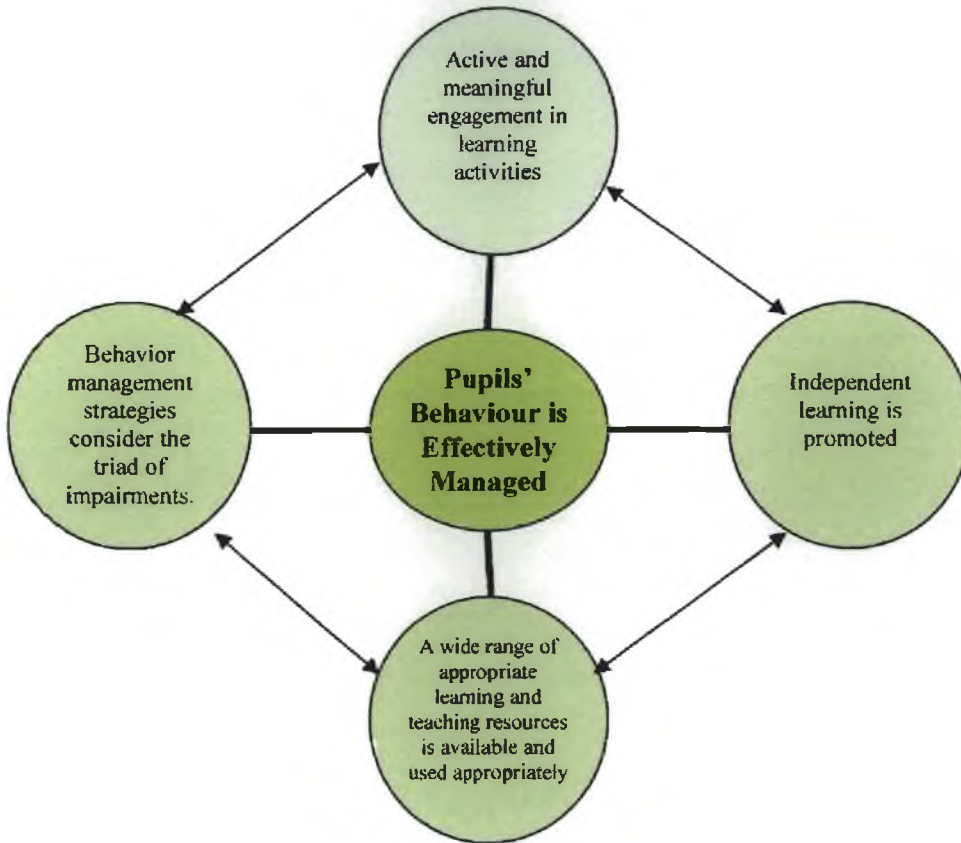


Figure 25. Factors Allocated Directly Similar Rating Scales Related to the Effective Management of Pupils' Behaviour

As evidenced in Table 39 below, a high degree of similarity was evident between the effective management of pupils' behaviour and classroom organisation, consideration of the visual learning modality of pupils' with ASDs, the implications of the sensory and perceptual sensitivities of pupils' with ASDs, the use of a range of teaching approaches and strategies and the effective management of SNA support.

Where a variety of teaching approaches and strategies was used in response to pupils' levels of task engagement, pupils' behavior appeared to be effectively managed. Elements of ASD-specific approaches were observed and included the PECS, the TEACCH, , intensive interaction and ABA. The use of songs and rhymes appeared to promote pupils' interest and assist pupils' learning as previously discussed in the analysis of Music. Attention to the purposeful manipulation of the learning and teaching environment seemed to impact positively on pupils' engagement. Pupils responded favourably to a low-stimulus environment in which visual and auditory stimuli were adjusted and where classroom areas were clearly delineated.

**Table 39. High Similarities in the Quantitative Analysis of the Video Data**

**1= never/almost never; 2=rarely; 3=sometimes; 4=often: 5=always or almost always**

**Pupils' behaviour in effectively managed.**

School A	School B	School C	School D	School E	School F	School G	School H	School I	School J
5	3	5	5	5	4	3	5	5	5

**Pupils with autistic specific disorders are accommodated in relation to the physical layout, organisation and environmental stimuli of the classroom.**

School A	School B	School C	School D	School E	School F	School G	School H	School I	School J
5	5	5	5	5	5	3	5	5	5

**Teaching approaches and strategies consider the visual learning modality of pupils with autistic spectrum disorders.**

School A	School B	School C	School D	School E	School F	School G	School H	School I	School J
5	4	5	5	5	5	4	5	5	5

**Strategies for the management of pupils' behaviour consider the implications of the sensory and perceptual sensitivities of pupils.**

School A	School B	School C	School D	School E	School F	School G	School H	School I	School J
5	4	5	5	5	3	3	5	5	5

**A range of teaching approaches and strategies is used to meet the group and individual needs of pupils.**

School A	School B	School C	School D	School E	School F	School G	School H	School I	School J
5	2	5	5	5	5	4	5	5	5

**Special Needs Assistant support is effectively managed.**

School A	School B	School C	School D	School E	School F	School G	School H	School I	School J
5	2	5	5	5	5	2	5	5	5

The management of pupils' behaviour was compromised where materials were not stored in an organised manner and the potential for distracters such as toys, books, objects of interest and objects with which pupils demonstrated a tendency to engage in perserverative behaviours were not sufficiently considered. The sensitive management of SNA-support contributed positively to the management of pupils' behaviour. Features of this management approach included facilitating pupils in engaging in tasks independently, employing a clear and reduced language of instruction and providing assistance only when necessary. Positioning of SNAs in an unobtrusive manner behind, and at a distance from pupils was observed to impact positively on pupils' task engagement. Where SNA-support was overly directive, it was observed to impact negatively on the management of pupils' behaviour and the development of pupils' independent learning skills. See Figure 26 below where

dashed lines are used to indicate the high similarity between the factors identified as contributing to the effective management of pupils' behaviour.

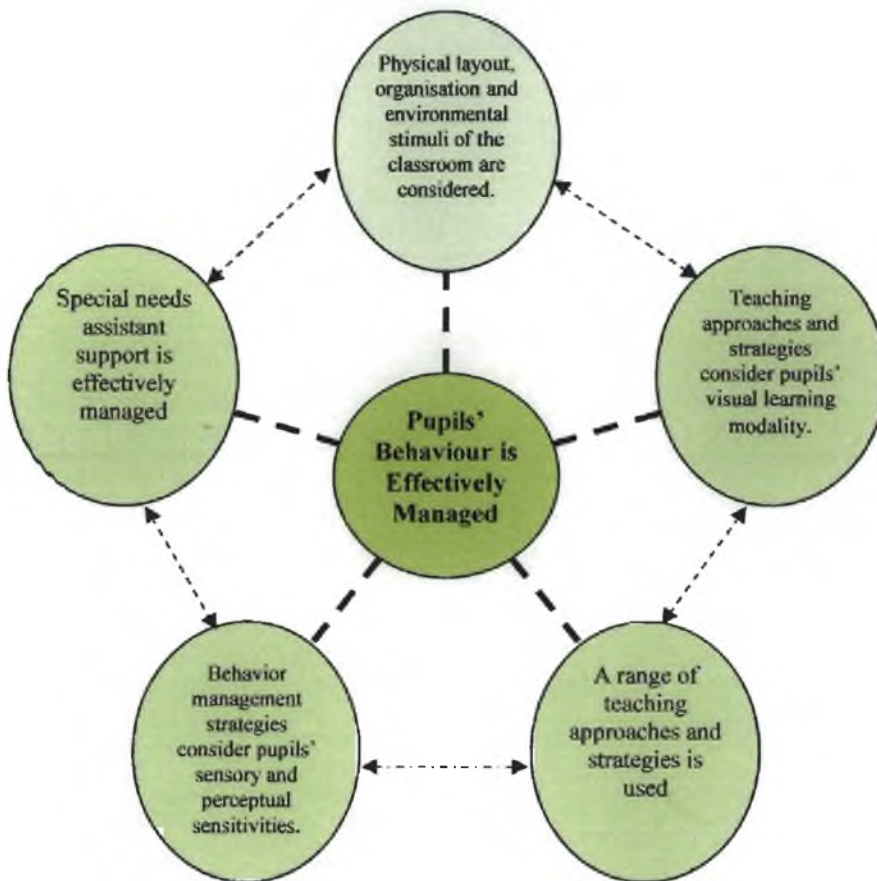


Figure 26. Factors Allocated Highly Similar Rating Scales Related to the Effective Management of Pupils' Behaviour

### Summary

The management of on-task behaviour of pupils was not related to the CPD programme accessed by research participants but rather was linked to a number of factors, which were observed to contribute to the effective management of pupils' behaviour. Analysis of the data suggests that the effective management of pupils' behaviour is linked to the teachers' proficiency to apply common and ASD-group pedagogic approaches and address the individual pedagogic needs of each pupil. The impact of the teacher's understanding of the theoretical basis for ASDs on practice also emerged as an influential factor in the management of pupils' behaviour. Similar factors were observed to affect pupils' on-task behaviour in the analysis of the time-sampling of the video-data, the critical event data and the quantitative and qualitative analysis of the video-observation schedules. This represents a positive impact on reliability and dependability, subject to the limitations

previously outlined. The findings suggest that attention should be directed to isolating the specific elements that contribute to the effective management of pupils' behaviour rather than debating the merits of particular programmes. Further research is necessary in order to isolate the relative contribution of the distinctive elements identified above to pupils' on-task engagement. The findings further highlight the role of common, group and individual pedagogic approaches in provision for pupils with ASDs and underline the criticality of teachers accessing ASD-specific CPD.

### **Additional Emerging Issues**

A range of additional themes related to Teacher Articulation, Litigation and the Media, The Special Education Support Service, Probation, Pupil and Sibling Awareness, Extending the Availability of CPD, Music and ASD-Specific Approaches continued to recur in the data analysis. See Table 40 for a summary of these themes. The themes of Music and ASD-Specific Approaches are combined with the analysis at Level Two above and the remaining themes are analysed here as additional emerging issues.

#### *Teacher Articulation*

Teacher articulation is concerned with teachers' understanding of how they construe and evaluate their own teaching, which Brown and McIntyre (1993) suggests is an important component of teachers' practice. Difficulties have been identified in the research in relation to teachers' accurately describing their practice. Research conducted by Marcos et al. (2008) suggests that teachers' written reflections on their practice employ a narrative and valuing appraisal of their accomplishments rather than current reflection models that use clear problem definitions, search for evidence, plan for change and review plans.

Issues related to teacher articulation emerged in the interview data of teachers who had completed the post-graduate certificate programme. While two teachers were very adept at describing their practice and approach, four teachers' descriptions did not match the video-data observed. This was particularly evident in relation to details of the curriculum being implemented and the approaches to learning and teaching being adopted. All six teachers referred to ASD-specific approaches but required

probing in order to acknowledge the role of generic methodologies such as direct teaching, teacher-modelling, task analysis, active learning and discovery learning in their practice. One teacher acknowledged that *“I need somebody, like the way you are even saying the curriculum, I can totally, it’s like you are doing the Marte Meo on me, I can connect to what you are saying about the curriculum”*.

Two focus group participants in two schools where the teachers had completed the post-graduate certificate programme initially considered that as teachers they had no skills relevant to teaching pupils with ASDs. On being allowed to reflect on their statements they agreed as encapsulated in the words of one participant that *“I suppose from the experience of teaching children, I know how to deal with him. I know how to have a sense of humour with him. I know when he comes in and that he is very sensitive to noise that if my voice is even raised a little bit, he will say are you cross today Emma. And I will say, yes I am Ralph and I will give him a reason and have a joke with him. So I suppose in that sense I know how to relate to children”*.

The finding in relation to teacher articulation suggests that programmes of CPD should encourage teachers to reflect on and articulate their practice. This is significant in view of the finding at Levels Two and Five that teachers are using a combination of common, group and individual pedagogic approaches in meeting pupils’ needs. This finding corroborates research conducted by Buehl and Fives (2009) that further research is needed on teachers’ beliefs regarding the source and stability of their teaching knowledge.

### ***Litigation and the Media***

All ten teachers referred to litigation and three teachers specifically referred to the media. Nine teachers stated that they were conscious of the possibility of litigation, which particularly influenced the way they planned for, monitored and recorded pupils’ progress. One teacher noted that *“you also become cautious about what you write. Less is more sometimes”*. Two teachers who had completed the post-graduate certificate programme expressly related parental satisfaction to worrying less about the threat of litigation.

**Table 40. Nature and Frequency of Selective Data Codes Related to Additional Emerging Issues**

<b>Teachers who had Completed the Post-Graduate Certificate Programme</b>	<b>Teachers who had not Completed the Post-Graduate Certificate Programme</b>
<b>Additional Emerging Issues (14)</b>	<b>Additional Emerging Issues (12)</b>
Autistic Spectrum Disorder-Specific Approaches (60)	Autistic Spectrum Disorder-Specific Approaches (29)
Applied Behaviour Analysis (15)	Applied Behaviour Analysis (1)
Treatment and Education of Autistic and related Communication handicapped CHildren (9)	Treatment and Education of Autistic and related Communication handicapped CHildren (2)
Combined-Skills Approach (9)	Combined-Skills Approach (8)
Counter-Intuitive Approach (6)	Counter-Intuitive Approach (8)
Social Stories (2)	Social Stories (2)
Litigation and the Media (17)	Litigation and the Media (11)
Special Education Support Service (27)	Special Education Support Service (15)
Music (4)	Music (5)
Inclusion (11)	
Developmental Approach (4)	
Marte Meo (3)	
Teacher Articulation (10)	
Manual Signing System (1)	
	Experiential Learning (6)
	Probation (5)
	Picture Exchange Communication System (2)
<b>Principals in Schools where Teachers had Completed the Post-Graduate Certificate Programme</b>	<b>Principals in Schools where Teachers had not Completed the Post-Graduate Certificate Programme</b>
<b>Additional Emerging Issues (6)</b>	<b>Additional Emerging Issues (7)</b>
Applied Behaviour Analysis (11)	Applied Behaviour Analysis (8)
Primary Curriculum Support Programme (4)	Primary Curriculum Support Programme (2)
Probation (6)	Probation (11)
Litigation and the Media (15)	Litigation and the Media (19)
Special Education Support Service (15)	Special Education Support Service (6)
Music (4)	Pupil Awareness (4)
	Siblings (5)
<b>Focus Groups in Schools where Teachers had Completed the Post-Graduate Certificate Programme</b>	<b>Focus Groups in Schools where Teachers had not Completed the Post-Graduate Certificate Programme</b>
<b>Additional Emerging Issues (3)</b>	<b>Additional Emerging Issues (4)</b>
Continuing Professional Development Required (28)	Continuing Professional Development Required (1)
Music (1)	
Teacher Articulation (3)	
	Applied Behavioural Analysis (4)
	Litigation and the Media (3)
	Special Education Support Service (5)

One of these teachers captured the essence of parental experiences and the skills required by teachers to develop parents' confidence and satisfaction:

*"I am dealing with parents that you know I feel they are living bereavement and they are at the beginning of a journey when I have them at reception class. It's lovely being there to support them and they may not be with me on that journey and we may not be singing off the same hymn sheet initially but we do get there. As long as I can see their side and they can see my side and as long as I can always support why I am doing certain things and back it up and it comes back to the curriculum. As long as you have that framework you are fine".*

One teacher who had completed the programme stated that the possibility of litigation didn't impact on her and stated that *"there is no point in us trying to compete with the ABA crowd"*. These findings suggest that participation in the post-graduate programme may contribute to the alleviation of stress in relation to litigation. Three teachers expressed concern with regard to the inaccurate portrayal of school-based provision for pupils with ASDs in the media and the failure to capture the complexity and heterogeneous nature of ASDs. One teacher who had teaching experience in the United States noted that *"in America that stress would never have been put on a teacher. Because there are supervisors and principals and CEOs and that is their job. In the school we were in we were teachers"*.

All principals in schools where teachers had completed the post-graduate certificate programme referred to litigation and three principals in schools where teachers had not completed the programme referred to litigation. Principals noted that they were particularly conscious of this in the management of pupils' care needs and in providing an appropriate education for pupils. One principal in a school where the teacher had completed the programme had adopted the strategy of a whole-school approach to planning and recording stating that *"now I feel the onus is on us to write down and record what we are doing so in the event that this is challenged that we can stand up and say this is what we were doing and this is the success rate we had and this is why we choose to go forward this way"*. Three principals in schools where teachers had not completed the programme had direct experience of litigation, the



effects of which are captured in the words of one principal, *“but I do know that if you are on the receiving end of that, it’s very stressful for the teacher and for the staff because they are nearly afraid that they are going to do something inappropriate now. Not be up to scratch in some way or other, now I have been there myself and I suppose it caused me to be over scrupulous”*. One principal referred to reaping the benefits of litigation through the appointment of an additional teaching post to the school for a year, which enabled the school to develop and adapt the curriculum. Five principles emerged from research conducted by Scheffel, Rude and Bole (2005) on avoiding special education due process hearings. These principles include ensuring teachers understand law and regulations, the expertise of individual education plan-team members, the commitment of the school to pupils with special educational needs, access to competent personnel with knowledge of the child’s special educational need and the availability of credible data documenting the child’s progress.

Two principals in schools where teachers had completed the post-graduate certificate programme and two principals in schools where teachers had not completed the programme referred to the reporting of ASDs in the media. One principal noted that the effect caused one to question one’s own practice *“all the hype about it and the media attention and maybe you feel what you are doing isn’t correct”*. The other principal referred to what he considered misrepresentation in the media, *“but I think a lot of the journalists out there, I mean I was seething there for the last couple of months because there has been a couple of programmes on (name of station deleted) Radio and an article in the (name of local paper deleted) and in the (name of national paper deleted) about this particular individual, who we were talking about, who said nothing had been done for her child, that is grossly unfair”*. Another principal noted the school’s experience of the reluctance of the media to report on pupils’ success in school, observing that:

*“A little boy who is here at the minute, a wonderful lad, never would have gone to mainstream but has reached his potential. A fantastic fella and the parents are thrilled with it. He is just brilliant and he has overcome all his difficulties and is leading a fantastic life, and he has fantastic supportive parents as well, I must say.*

*Then we have another child that Mary knew that was in another situation, I don't know. We tried every avenue we could to get that in the paper".*

The Supreme Court Judge, Mr. Justice Hardiman, criticised the media's unwillingness to come to grips with detail and focus on some incidental but picturesque detail, or on the need for a headline (Browne, 2008). This has particular resonance in relation to the media's reporting on ASDs. Feinberg and Vacca (2000) suggest that the modern media contributes to controversy and contradictions related to ASDs through providing conflicting and contentious views on the disorder.

### ***The Special Education Support Service***

All teachers affirmed the CPD they had received from the SESS and used words and phrases such as *"brilliant"*, *"absolutely brilliant"*, *"a lifeline"*, *"very, very good"* and *"it's great, it gave me great confidence"* to describe the CPD. The availability of support and the opportunity to renew one's enthusiasm and consolidate existing knowledge were commended. One teacher articulated this in terms of *"it's just wonderful, last week I went to Intensive Interaction. Thought I knew what I was on about and to a certain extent we were doing a lot of it, but to go and hear that woman and like she knew what she was talking about, (name deleted). It's when you even know it you need to go back and be reminded so that what she is saying affirms your practice"*. The benefits of being provided with opportunities to meet with other practitioners was also affirmed and articulated by one teacher in terms of *"even meeting the other teachers and chatting to them or hearing something small or getting to buy new books outside the door or new pieces of equipment, you are dying to go home and dying to get back to your class because you have a breath of fresh air as though you have been taken out and given a wash"*. The positive impact of CPD through the SESS for two probationary teachers was referred to and captured in the words of one teacher as:

*"Even if it's just the fact getting people together people that are in special education and especially autism. You know, like that, I am the only teacher in the school that is working in the autism class and it's so different to the other classes here in the school. And teachers don't realise how different it is and it's great to meet then other*

*teachers who are in similar situations to you and having similar problems and you can talk to them about it”.*

The availability of support from the SESS for whole-staff CPD was particularly affirmed. One teacher criticised a conference organised by the SESS as being too theoretical, repetitious and lacking in practical activities. Another teacher referred to the same conference as “*overwhelming*” for a teacher colleague who had just taken up a position teaching pupils with ASDs and identified what she described as “*that level of being ready for learning*”, as the reason why she herself enjoyed the conference.

All principals affirmed the establishment of the SESS. Principals used words such as “*hugely positive*”, “*very positive*”, and “*great*” to describe the service. Two principals referred positively to the advice that they had received through the phone-support. Eight principals commended the greater availability of CPD for teachers that was available through the SESS. The provision of in-school whole-staff CPD by three visiting experts and two practitioners was affirmed by five principals. One of the principals stated in relation to the practitioner that “*she was absolutely brilliantly and probably in fairness, put us back on the track from the way, which was wrong that we were going down at the time. She gave us in-service of two days and she was absolutely brilliant*”. One principal advised that the SESS should contact the schools in a more proactive manner rather than schools waiting to be contacted by the SESS stating that “*but what happens then is you are supposed to be ringing them to come and I think they should be more pro-active, they know we are here*”. It is important to state that as part of my role with the DES, I provide professional advice to the SESS and teachers would therefore be aware of my close association with the service. This may have influenced research participants in their comments related to the SESS. However this finding also reflects recently conducted reviews of research, which suggests that short well-organised workshops on research-based topics that are relevant to teachers should not be dismissed (Kennedy, 1998; Yoon et al., 2007; Guskey and Yoon, 2009). As no external evaluation of the SESS has been conducted to date, the findings may be peculiar to the research participants in the research study and may have also been influenced by my professional involvement with the service.

### *Probation*

Two of the teachers who had not completed the post-graduate certificate programme were in their probationary year (DES, 2000b; 2005f; 2006d). Both teachers and principals in these schools were satisfied that it was possible to be probated in these teaching positions. However both referred to the time required to meet the planning requirements of the probationary process, provide appropriate resources for the pupils' learning and teaching and engage in CPD related to the learning and teaching of pupils with ASDs. The findings also highlight the importance of whole-school support structures being available for teachers during this year. One teacher noted that *"no it's not impossible but it makes it a lot harder. It's very time consuming because what I have found with my notes and things, that I was making so many resources myself that it was time consuming and then having to fill out the lesson plans and things like that"*. In one of the schools, the principal had put a mentoring programme in place, which she described as:

*"It is the first year we did it, really we did it because before we would only have had one new teacher and everyone would have mucked in and helped. I felt very strongly and I suppose I did organise it because I felt very strongly that we had people coming in new and all those kids as well and I suppose it was entering into a new era, with all the new staff that really they would need support, as much support as we could give them"*.

Newly appointed teachers in this school were also given a folder containing curriculum-related material and checklists. It is significant that the teacher in the latter school referred to feeling very supported whereas the teacher in the other school referred to having to mediate the curriculum from her own experience.

Two principals in the schools where teachers had completed the post-graduate programme considered it would be preferable to appoint more experienced practitioners to the class, while acknowledging that *"a new teacher out of college could do it but they need an awful lot of support"*. One principal in a school where the teacher had completed the programme believed that teachers couldn't officially be probated in these classes and on being informed that the contrary position

prevailed remarked that *“I wouldn’t want to do it”*.

### ***Pupil and Sibling Awareness***

The principal of one of the schools where the teacher had not completed the post-graduate certificate programme described the self-knowledge of post-primary pupils with ASDs in relation to ASDs as contributing positively to their school placements. The principal noted that *“the student with autism would tell you, I’m autistic, I don’t have to do this or I can’t cope with that”*. The principal attributed this approach to the HSE psychological service and viewed it as a positive mechanism to enable pupils to cope in schools in addition to promoting the understanding of other pupils. The principal also described a sibling programme that was in place in the school for all siblings of pupils in the school. This was organised by the HSE psychologist and run over a period of six weeks for an hour and a half each evening in the school. The dedication and commitment of the principal in organising this event is evidenced in his comment *“we open the school, I was unsure about the insurance aspect with regards to people coming in but I took a chance on it anyway because I thought that it was a valuable”*. The finding confirming the importance of developing pupils’ self-knowledge of ASDs and supporting siblings has been affirmed in research (Doherty, et al., 2000; Hutton and Caron, 2005; Council of Europe, 2009b).

### ***Extending the Availability of Continuing Professional Development***

All of the focus group participants who were teaching in mainstream schools where teachers had completed the post-graduate certificate programme articulated a need for CPD for mainstream teachers in the area of ASDs. The challenges for class teachers in managing inclusion in classes where there are pupils who have poor literacy skills and pupils with a range of special educational needs was noted. The role of trial and error in meeting the needs of pupils with special educational needs was referred to by one teacher as *“I pick up these things as I go along, so I have absolutely no idea if I am doing any good”*. A need for CPD in relation to practical strategies and techniques to meet the needs of pupils with special educational needs included in mainstream classes was identified. One teacher remarked that *“the mainstream has to have specific strategies and the whole way an autism child thinks. Unless you have that you are just going to be beating your head off a stone wall*

*because what you are saying to them, not only are they not even listening to you, they are not processing the language”.*

The possibility of both class teachers and learning support teachers having pupils with AS in their classrooms without the requisite knowledge and understanding was identified. One class teacher recounted her experience as:

*“I had a child who had Asperger’s the first year when I started here and he had not even been diagnosed at that stage. The poor child was in floods of tears for the first couple of weeks and I had no idea what was wrong, no idea what to do with him and I thought, well you know you presume it was you. He would give you all these smart alecky answers that I just thought were being cheeky. Now I realise they weren’t been cheeky. He would say I did not hear one word you said and I thought a child would never talk to me like that in school, but he was stating a fact”.* The teacher remarked that *“if I had only known about that it would have been so different”.*

Providing principals with access to CPD that enhances their management and instructional roles in relation to the ASD class should also be considered. It is to be noted that where principals had accessed ASD-specific CPD, it was observed to impact positively on these roles. This is consistent with literature related to the importance of developing the instructional role of principals as it relates to provision for pupils with special educational needs (Powell and Hyle, 1997; Crockett, 2002). Borba (2009) considers that instructional knowledge is imperative for a principal to be an effective instructional leader. The need to extend the availability of CPD for class teachers, learning support teachers and principals is commensurate with the findings at Level Three above related to facilitating whole-school access to CPD. I concur with the Council of Europe (2009b) that while it is unrealistic to expect all teachers should have extensive expertise in ASDs, each teacher should have sufficient awareness to recognise what they do not know and be in a position to seek advice and support when necessary.

### *Summary*

The themes that emerged, while not directly related to the research question, are particularly relevant to the research focus and have contributed to a further enrichment of the findings. The implications of these themes will be discussed further in the final chapter.

#### **Participants' Responses to the Research Findings**

In the follow-up letter issued by St. Patrick's College eliciting interest in participating in the research on the eight of November 2006, it was stated that I would return to the school following analysis of all of the data and present the findings of the research in order to invite participants' response. See Appendix E for a copy of this letter. It was further stated that the response would be incorporated in the research findings. During the school visits, I advised that time constraints and work commitments may not allow me to return to the school but that I would e-mail a summary of the research to participants, through the class teacher, in order to provide an opportunity for responses. All participants were advised that they could communicate their responses directly to me. Research participants expressed satisfaction with this proposed process.

I contacted all ten class teachers by phone in the period between the third and the sixth of November 2009 in order to inform them that I would forward a summary of the research findings to them and to certify their e-mail contact details, which I had obtained during school visits. I forwarded the summary of the research findings and e-mail to all class teachers within this time-period and requested that responses be returned by the thirteenth of November. See Appendix L for a copy of the correspondence with research participants and a copy of the research summary. I was conscious of compiling the summary in a manner that would make it accessible and practicable for practitioners to engage with and respond to, while simultaneously maintaining the integrity of the findings. The record of participants' responses to the research summary is detailed in Table 41 below. A 90% response rate was recorded for class teachers, 40% for principals, 28% for school staff and a 53% composite response rate. The response rates for principals and schools staff represent reasonable return rates, with the response rate for school staff low. However this low response

does not indicate that the data are worthless and cannot contribute to the research (Fife-Schaw, 2000).

All respondents provided positive responses and expressed agreement with the findings. As suggested by Guskey (2000), participants commented mainly on the issues that related to the day-to-day operation of their classrooms. Comments focused on a number of key areas that included the practical application of the findings, the importance of CPD for teachers, the key roles of whole-school staff and principals, special education input in ITE, the management and training of SNAs, pupils' on-task behavior, the need for curriculum and organisational guidelines and the SESS. Respondents commented on the practical applicability of the findings to schools and the potential of the research to contribute to ITE and further teacher training. Participants variously described findings as *"very interesting"*, *"the overall conclusion was one of immense gratitude and pride that one of our own as it were took the trouble to articulate the problems we deal with on a daily basis and come up with sensible solutions to deal with them"*, *"encouraging"*, *"interesting and useful findings"*, *"useful and to the point"*, *"enlightening that someone understands the challenges faced by teachers"*, *"very valuable research"*, *"these findings will be invaluable in the future"* and *"depth of content"*.

All participants considered that CPD for teachers of pupils with ASDs was critical. The teacher in School D particularly emphasised the contribution of learning communities and observed that *"I strongly agreed with the recommendation that communities of discourse and practice should be promoted in CPD programmes. I have always found it so helpful and frequently inspirational to meet and talk with other teachers in the same position. Teaching pupils with autism is so specific and you can really experience a true meeting of minds on these occasions. On many occasions, I have also learned about important new pieces of information (e.g new websites, materials or practical approaches) that have really helped in the classroom"*. This teacher also considered that while teachers could pursue their own CPD in ASD, it was important for consistency that all teachers accessed similar CPD.



**Table 41. Participant Feedback**

School	Teacher	Principal	Number of Staff Responses	Total Number of Research Participants	Total Number of Returned Responses
A	√			4 (1 staff member on leave)	1
B	√	√	1	3	3
C*	√			4	1
D	√ (retired)		1	4	2
E	√	√		4	2
F	√			3	1
G*				4	0
H	√	√	2	4	4
I	√	(retired)	1	4	2
J*	√	√		4	2
<b>Response Rates</b>	<b>90%</b>	<b>40%</b>	<b>28%</b>	<b>38</b>	<b>18</b>
<p><b>* Most responses were received by 15-11-'09. An additional e-mail was sent to these teachers on 23-11-'09 as a reminder. The teacher in School J returned a response on 24-11-'09 and the Teacher in School C returned a response on 25-11-'09.</b></p>				<p><b>Total Response Rate = 53%</b></p>	

The importance of having sufficient knowledge to liaise with parents was referred to by the teachers in Schools D and F. The need for CPD for principals and whole-school staff was referred to by a member of the school staff in School E, teachers in Schools C, E and F and the principal in School E with the teacher in School I remarking that *“There needs to be CPD for teachers of students with ASDs but also for teachers that are not directly involved as in my experience there is a lack of awareness, understanding and acceptance amongst other members of staff of pupils with ASDs. I also strongly agree that there needs to be more of an input on special education in teacher training programmes especially on ASDs as they are so complex and varied”*. Increasing input on special education in ITE was referred to by the teacher, principal and staff in School B. the teachers in Schools D and I and the principal in School E. This concern is articulated in the observations of the teacher in School F who stated that: *“It is sad to see, and difficult to believe, that special education is still an optional module in training college and I believe it is difficult to*

*get college placement on this module. Many young teachers arrive in primary school with no experience of special needs teaching. Those who are lucky enough to get placement in the module are sent to schools and told their role is "strictly observation". In my opinion it is not possible to learn without taking an active part in the teaching and learning in the classroom".*

The importance of support in the management of SNAs for teachers was referred to by class teachers in Schools A, C, D, E, the teacher, principal and staff in School B and School H. The need for training for SNAs was referred to by the teachers in Schools E and D, the principal in School E and the teacher, principal and staff in School B.

The class teachers in Schools A, D and F remarked positively on the findings of the research in relation to on-task behavior. The teacher in school A remarked that *"I was delighted to find the importance of "intrinsically appealing structured learning" included in findings. It really is the key to successful teaching and learning. If you can base your work on this principle, you can avoid resistance from the pupil, thus eliminating unnecessary struggle. This can transform your job from a battle to an adventure. This increases the chance of retaining teachers in these classes as they might learn to love it!"* The teacher in School C observed from her own experience that sometimes teachers become overly focused on ASD-specific approaches and interventions and do not link that a range of generic teaching approaches may be also be used in implementing education programmes for pupils with ASDs. The teacher confirmed the findings of the research in relation to the possibilities of using common pedagogic approaches. The teacher in School A considered that there was a need to focus on the social dimension of each element of the triad impairments in the learning and teaching of pupils with ASDs.

The finding in relation to the provision of guidelines to assist schools at the initial establishment of classes for pupils with ASDs was affirmed by the teachers in School C and I and the Principal in Schools E and B. The need to develop curriculum guidelines for junior and senior cycle pupils with ASDs was referred to by the

teacher, staff and principal in School H and the need for senior cycle curriculum guidelines was affirmed by the teacher in School F.

The SESS was referred to by the teacher, staff and principals in School B and H and the teacher in School D. The role of the SESS in providing in-school support is captured in comments such as “*SESS is the heartbeat of these units*”, “*I have always believed that the SESS worked hard for teachers and pupils with ASD*” and “*The SESS have been such a marvellous assistance to all of us working in the area of ASD, especially at local level*”.

An issue was raised by the Principal in School E, which did not emerge in the research. The principal suggested that some labels and terms used for classes and children with ASDs are “*unacceptable and/or inaccurate*” and suggested that “*a common recommended language would be useful and welcomed*”. Criticism was made of the term “*autism units*” and it was suggested that the terminology used should reflect an emphasis on the child first

### **Conclusion**

Evaluating the impact of a specific programme of CPD on practice in schools emerged as a complex process embedded in multiple and uncontrollable variables related to real world research and heterogeneous research populations. However valuable findings emerged within the limitations of the research, which may potentially contribute to the further development of educational provision for pupils with ASDs.

The research findings identified a proactive and enthusiastic approach to new professional challenges by all ten teachers at the antecedent level. The high motivation levels may be peculiar to this research population and should be considered when interpreting the findings of the research. The apprehension levels experienced by five of the teachers who completed the post-graduate certificate programme may be the factor, which contributed to the choice of programme as similar apprehension levels were not recorded for three of the teachers who had not completed the programme. It appears from an analysis of the data that teachers’

previous teaching experiences and the prior experience of the school in meeting the needs of the pupils with ASDs are factors, which affect the apprehension levels of teachers at the initial establishment of provision. Initial teacher education provided teachers with a knowledge base of teaching and proficiency in decision making linked to the concept of reflective practitioner, which was also evident in the common, group and individual pedagogic approaches adopted. However deficiencies in ITE related to special education input were also evident. Teachers' prior professional experiences emerged as factors that could potentially impact on teachers' practice.

The appropriateness of the content and process of the post-graduate certificate programme was evaluated at Level One. The impact of external experts, parental experiences and the views of individuals with ASDs on teachers' knowledge were identified as positive features of the programme. The potential of the programme as a stimulus for further learning, its contribution to the creation of a learning community of discourse and practice for participants and the enabling approach adopted by tutors were also identified as valued outcomes. The need for the continued availability of CPD related to ASDs for teachers was articulated.

Level Two was concerned with evaluating the, affective cognitive, and behavioural learning associated with participating in the post-graduate certificate programme. Engaging with parental experiences, exploring the views of individuals with ASDs and the potential of the programme as a stimulus for further learning emerged as possible affective learning outcomes. The programme may also have contributed to participants' high levels of motivation. Cognitive learning was identified as the acquisition of a broad theoretical base related to a knowledge and understanding of ASDs. Teachers who had not completed the programme had acquired a knowledge and understanding of ASDs related to their prior teaching experiences, the CPD they had accessed and individual epistemological bricolage. Behavioural learning was evident in the manner in which teachers who had completed the programme directed attention to the importance of mitigating the effects of the social deficit of the triad of impairments. All teachers directed attention to classroom organisation, accommodation of the communication and rigidity and thought behaviours of the

triad of impairments, curriculum implementation and teaching approaches. It was not possible to demonstrate a correlation between participating in the post-graduate programme and teachers' behavioural learning as it related to these areas. Teachers' ITE experiences and curriculum-specific CPD were evident in their knowledge of curriculum. The research findings suggest that the principles and content of the Primary School Curriculum have direct applicability to the learning and teaching of pupils with ASDs. A need for curriculum guidelines for teachers in the junior classes and direction in planning appropriate curriculum programmes for second-level pupils was articulated. Music emerged as an area that should be further explored and researched in the education of pupils with ASDs. No teacher used an ASD-specific approach exclusively but rather used elements of these approaches combined with common and individual pedagogic approaches. As individual pupils' progress was not tracked, it cannot be stated that the curriculum and approaches being observed provided for meaningful progress. However the combination of common, group and individual pedagogic approaches being used should be further researched through ascertaining the precise impact of the components of these approaches on pupils' progress.

Critical issues related to organisational support and change were identified at Level Three. The need for clear directions and support at the initial establishment of a class to assist principals in their administrative, management and instructional duties was identified. It may be that participation in the post-graduate certificate programme contributes to highlighting the importance of promoting the principal's role in the class as indicated by the high frequency with which the role featured in the interview data of the six teachers who had completed the programme. The role of teachers in mainstream classes in supporting the inclusion of pupils with ASDs was identified and points to the importance of all teachers developing a knowledge and understanding of ASDs. The number of references to multi-disciplinary support by teachers who had completed the programme suggests that participation in the programme may provide participants with a broad knowledge and understanding of the potential of the impact of multi-disciplinary support on pupils' educational provision. While the role of the SNA was considered a critical organisational support, the need for clarification both officially and within schools in relation to the

roles and responsibilities of SNAs was articulated. The need for input at initial, induction and inservice levels for teachers in the effective management of SNA-support and the provision of CPD for SNAs related to their roles and responsibilities was articulated. The development of staff's knowledge and understanding, facilitating the development of an inclusive school ethos and a recognition of teachers' expertise emerged as cascade effects of participating in the programme.

It was not possible to identify precisely the impact of the post-graduate certificate programme on participants' use of knowledge and skills at Level Four. An understanding of the individual needs of each pupil, the role of assessment, the need for individualised planning and the importance of liaising with parents were referred to both by teachers who had completed the programme and those who had not. However the broad theoretical knowledge of ASDs acquired by participants in the programme may potentially impact on teachers' understanding of pupils' individual needs and their communication with parents. The in-depth knowledge of the process of individualised planning articulated by teachers who had participated in the programme suggests that this may be a valued outcome. However this finding stems from interview data only and is limited by the decision taken not to examine teachers' planning.

The levels of on-task behaviour of pupils identified at Level Five could not be linked to a programme of CPD but rather were related to the various use of common, group and individual pedagogic approaches combined with the practical application of a theoretical understanding of ASDs. Direct similarities in rating scales emerged between the effective management of pupils' behaviour, active and meaningful engagement in activities, the promotion of independent learning, consideration of the implications of the triad of impairments in behaviour management strategies and the availability and appropriate use of a wide range of learning and teaching resources. High similarities in rating scales were evident between the effective management of pupils' behaviour, classroom organisation, consideration of pupils' visual learning modality and pupils' sensory and perceptual sensitivities, the use of a range of teaching approaches and strategies and the effective management of SNA support. Where these elements were present, there was less evidence of off-task behaviour.

Similar to the findings in relation to teaching approaches further research is required in order to identify the precise impact of the discrete elements on pupils' on-task behaviour.

The additional emerging issues identified in the research related to Teacher Articulation, Litigation and the Media, The Special Education Support Service, Probation, Pupil and Sibling Awareness and Extending the Availability of CPD were unexpected but valuable outcomes, which require further exploration in future research.

Based on the research findings identified in this chapter, the final chapter will detail the conclusions and implications for research, policy and practice. Grundy and Robison (2004) suggest that CPD should serve the three principal functions of extension, renewal and growth, which they argue are both systemic and personal. The authors define extension as introducing new knowledge and skills to a teacher's repertoire, renewal as being concerned with the renovation of existing knowledge and skills and growth as relating to the development of greater levels of expertise. According to Day (1999), CPD may succeed in accelerating additive growth, in relation to progressing knowledge, skills and understanding, or effecting transformative growth, resulting in major changes in beliefs, knowledge, skills and understanding. The chapter will focus on ascertaining whether the effects of CPD as identified in the findings of the research have fulfilled these functions with reference to the impact on teachers' motivation and attitude, knowledge and understanding, skills and practice (Powell, et al., 2003). The extent to which the functions of the aims of CPD as they relate to advancing the competitive purposes of social and economic policy, school improvement priorities and individual growth have been fulfilled will also be considered (Logan and Sachs, 1991).

## **CHAPTER TEN**

### **CONCLUSIONS AND IMPLICATIONS FOR RESEARCH, POLICY AND PRACTICE**

#### **Introduction**

The aim of this research study was to evaluate the effects of a post-graduate certificate ASD-CPD programme, delivered at St. Patrick's College, Drumcondra, Dublin on practice in six schools and to establish whether a cascade effect on practice in schools could be established. The research focused on teachers' approaches to learning and teaching and establishing whether a cascade effect of participating in the programme could be identified through engaging both school principals and other teaching staff in the research. The research also evaluated individual teachers' practice and evidence of a cascade effect in four schools where teachers of pupils with ASDs had not participated in this ASD-specific post-graduate programme in order to establish whether particular valued outcomes associated exclusively with participating in the programme could be identified. As suggested in the literature review, the complexity of isolating factors such as expertise, capability, personal and professional biography, situational, emotional and psychological factors, the heterogeneous needs of pupils and changes over time and circumstance should be considered when interpreting the findings of the research (Hargreaves, 1998; Day and Sachs, 2004). The research findings confirm Guskey (1995) in concluding that a specific CPD programme impacts differently on each individual teacher and identifying a universal truth that can be applied to all teachers is therefore unfeasible. However a range of valuable findings emerged from the research, which has the potential to inform research, policy and practice in the future.

In this chapter, a summary of the main findings is provided with reference to the model of CPD constructed from the literature review. The research questions were concerned with ascertaining whether the ASD-specific CPD programme fulfilled the functions of CPD as they apply to the aims and areas of impact of CPD. Initially consideration will be given as to whether the functions of extension, renewal and growth have occurred in relation to the aims of CPD as they relate to individual teacher growth, school improvement priorities, and social and economic policy and



whether this growth can be termed additive or transformative (Logan and Sachs, 1991; Day, 1999; Grundy and Robison, 2004). Particular attention is directed towards considering individual teacher growth in terms of teachers' motivation and attitude, knowledge, understanding, skills and impact on practice (Powell et al., 2003). Additional issues that emerged during the research are also discussed. The implications of the findings for research, policy and practice in the provision of CPD for teachers of pupils with ASDs are considered and recommendations made.

The literature review for this research was initiated in October 2005 and the selection of the research participants commenced in May 2006. The field work for the research was conducted in the 2006-2007 school year. Data were then transcribed, analysed and collated. The review of literature continued throughout the duration of the research and was purposefully used to inform the process.

### **The Functions of Continuing Professional Development**

The three principal functions of CPD were identified by Grundy and Robison (2004) as extension, renewal and growth, which are driven by both systemic and personal needs. Day (1999) suggests that CPD may succeed in accelerating additive growth, in relation to progressing knowledge, skills and understanding, or effecting transformative growth, resulting in major changes in beliefs, knowledge, skills and understanding.

It is not possible to determine precisely at what levels the functions of CPD related to extension, renewal and additive and transformative growth were fulfilled as a baseline in relation to these areas was not established for this research. However it is suggested that these functions may have been fulfilled to varying degrees in relation to participants' cognitive, affective and behavioural learning. This was evident in relation to participants' knowledge and understanding of ASDs, the development of empathetic understanding, classroom organisation, accommodation of the triad of impairments and teaching approaches. A knowledge and understanding of ASDs, accommodation of the triad of impairments and proficiency in a range of ASD-group specific teaching approaches were identified in the literature review as being critical to effecting learning and teaching for pupils with ASDs (National Research Council,

2001a; NIASA, 2003; DES, 2006a; SIGN, 2007; Jordan, 2007b; Jones et al., 2008). The potential of an empathetic understanding of individuals with ASDs to impact positively on understanding pupils' learning styles and to enhance curriculum access emerged in examining the autobiographical experiences of individuals with ASDs (Williams, 1993, Grandin, 1995; Gerland, 1996; Lawson, 2000; Trevarthen, et al., 1998; Sainsbury, 2000; Jackson, 2002; Bogdashina, 2006; Waller, 2007). While there is limited research available on the impact of the organisation of the physical environment on pupils' learning, the SIGN National Clinical Guideline suggests that attention to classroom organisation should be considered good practice in the education of pupils with ASDs (SIGN, 2007). The findings in relation to the functions of CPD therefore represent valued outcomes for teachers in participating in the post-graduate certificate programme.

Further positive findings were evident in relation to the functions of CPD in the area of organisational support and change. Participants were cognisant of the value of the support of the principal, teaching colleagues and multi-disciplinary personnel and the importance of appropriately managing SNA-support. The potential of participation in the programme to effect organisational change related to the promotion of the principals' management and instructional role, the development of staff's knowledge and understanding of ASDs and the development of an inclusive school ethos was also evident. These represent important outcomes in view of the central role of the principal in effecting school improvement, the positive impact of collaborative practice and the importance of all staff working with individuals with ASDs having ASD-specific knowledge and understanding (Evans, 1996; Hargreaves and Fullan, 1998; Jones et al., 2008).

### **Individual Teacher Growth**

The areas of impact of CPD related to motivation and attitude, knowledge, understanding and skills and impact on practice were positively affected by teachers' participation in the post-graduate certificate programme. Teachers' motivation and attitude were particularly affected by engaging with the experiences of individuals with ASDs and their parents, interacting with external experts, liaising with other practitioners and being supported by tutors who were affirming and supportive. The

role of the programme in stimulating lifelong learning, developing writing skills and encouraging participants to read and research the area was also articulated. These identified areas suggest the socio-cultural view of learning where cognitive and affective development are strongly influenced by opportunities to talk and participate in learning communities of discourse and practice (Guldberg and Pilkington, 2006; 2007). Participants also referred to the positive impact on their individual growth of being directed to a wide range of literature related to ASDs, which confirms the assertion that it is essential that a conceptual framework of ASDs is informed by perspectives that both acknowledge the overt manifestations of behaviour, the underlying psychological bases and autobiographical experiences (Powell and Jordan, 1997)

Teachers' knowledge, understanding and skills and their impact on practice was discernible in relation to a number of critical areas. While all research participants demonstrated an understanding of the individual needs of each pupil, the understanding of those teachers who had completed the post-graduate certificate programme was situated in a broad theoretical understanding of ASDs. This was demonstrated by teachers' knowledge of the breadth of literature and broad theoretical bases of ASDs and teachers' confidence in their ability to provide appropriate learning and teaching experiences for pupils with ASDs. The in-depth knowledge and consistent approach of the participants who had completed the programme with regard to the individualised planning process suggests that this is also a valued outcome of completing the programme. This finding is limited to data from the interview process as planning documentation was not examined as part of the study. However it is an important finding in view of the findings of the literature review that individualised planning can empower teachers and families through explicitly detailing the strategies required to enable pupils to progress with reference to their identified priority needs, goals and targets (Kurtzig, 1986; Hagedorn, 2004; Hammond et al., 2006; Jung et al., 2008). Participation in the post-graduate programme alerted teachers to the importance of accommodating the needs of pupils with ASDs in relation to the physical layout, organisation and environmental stimuli of the classroom and the importance of considering predictability, structure and routine in the implementation of the curriculum. The literature suggests that these are

critical areas in providing for the learning and teaching of pupils with ASDs (Hogdon, 1995; Schopler et al., 1995; Porter and Ashdown, 2002). Those teachers who had completed the programme were observed to consistently employ strategies to mitigate the effects of the social deficits of the triad of impairments more often than those teachers who had not completed the programme. This represents a significant outcome considering the findings in the literature that the social impairment underlies the triad and is probably the most defining and potentially disabling feature of ASDs (Williams, 1993; Grandin, 1995; Sainsbury, 2000; Jackson, 2002; Jones, 2002b; Bogdashina, 2006; Wing, 2008).

Those teachers who had not completed the programme had accessed a variety of professional development programmes. The impact of the role of bricoleur and practitioner reflection contributed further to enhancing and developing all teachers' practice. This corroborates the findings of the literature review describing epistemological bricolage as a legitimate manner of learning and acknowledging the potential of reflective practice to contribute to teachers' practice (Schön, 1987; Bolam and McMahon, 2004; Freeman, 2007).

The findings of the research underline the importance of providing teachers with a range of CPD opportunities comprising theoretical and practical elements that enable them to effect appropriate learning and teaching for pupils with ASDs. The research also suggests that teachers may access the requisite knowledge, understanding and skills to provide appropriate education for pupils with ASDs through a variety of CPD programmes and experiences. However the possibilities for uncertainty in self-directed learning and the danger of teachers accessing programmes that do not have a sufficient empirical basis were also highlighted, which suggests the need for a directory of quality accredited and non-accredited CPD in order to ensure that teachers access appropriate CPD programmes.

### **School Improvement Priorities**

School improvement priorities connected with promoting the principal's management and instructional roles in respect of the class, adopting whole-school approaches to providing for pupils with ASDs, developing staff's knowledge and

understanding of ASDs and facilitating the development of an inclusive school ethos emerged as valued outcomes of participating in the programme.

The literature suggests that the promotion of the principal's management and instructional roles has the potential to impact positively on pupils' outcomes and transform schools into powerful learning and teaching organisations (Kearns et al., 1998; Benz et al., 2000; Davis et al., 2005). Whole-school approaches and developing staff's knowledge and understanding of ASDs are consistently affirmed in the literature (Jones et al., 2008; Parsons et al., 2009). While the concept of inclusion emerged as tenuous and constantly evolving, the finding that participation in the post-graduate programme may potentially facilitate the development of an inclusive school ethos that promotes the inclusion of all pupils in the activities of the school represents a positive outcome (Hegarty, 2001; Kyriazopoulou and Weber, 2009). The specific references made by principals of teachers who had completed the post-graduate certificate programme to the expertise in the classes suggests that participation in the programme assists in developing teachers' professional credibility in the school. This is an important finding considering the views expressed by five teachers who had completed the post-graduate certificate programme with regard to the importance of supportive school contexts when organising inclusion for pupils with ASDs and their non-ASD peers.

### **Social and Economic Policy**

The findings of the research indicate that the aims of CPD concerned with the implementation of social and economic policy were constructively impacted on. The prescriptive and managerial approach to the provision of CPD, cautioned against by Day and Sachs (2004) and Sugrue (2004), is less evident in the DES' policy, which refers to the importance of the individual pupil in the reform agenda and advocates a flexible, options-based approach to CPD.

The DES details its policy in Statements of Strategy. The Statement of Strategy 2005-2007 articulates the mission of the DES as providing for high-quality education, which will enable individuals to achieve their potential and to participate fully as members of society and contribute to Ireland's social, cultural and economic

development (DES, 2005f). Participants in the post-graduate certificate programme demonstrated an awareness of DES policy in relation to providing for pupils with ASDs and the key elements of appropriate provision related to adopting a pupil-centred approach that enables each pupil to develop to his/her potential. The Statement of Strategy 2005-2007 further acknowledges that the changing education environment requires ongoing, training, support and development for teachers (DES, 2005f). The provision of a range of supports and services for pupils with special educational needs to assist them to fulfil their potential and providing for the in-career professional development of teachers are specifically referred to in the Statement. Similar principles underpin the Statement of Strategy 2008-2010 and a commitment to enhancing teacher education and professional development is expressly articulated (DES, 2008). Peter Baldwin, Assistant General Secretary, DES, in presenting the views of the authorities on inclusive education, noted that the government had allocated funding for special education input in ITE programmes, induction and CPD (Baldwin, 2009). He stressed that it was essential that a flexible approach incorporating short seminars and workshops, on-line learning, publications and post-graduate programmes be adopted to the provision of CPD for teachers. The post-graduate programme therefore comprises a specific element of the DES' policy in providing CPD for teachers and the evaluation findings suggest that it is contributing positively to social and economic policy. However political tensions are inevitable in applying the findings of evaluation research due to the direct links between evaluation and decision-making and the fact that tensions exist in the relationship between research, policy and practice (Porter and Lacey, 2005). Marlett and Buchner (1992) detail the tensions emerging from the reduced availability of funding on special education provision in Canada, which resulted in an erosion of provision for pupils with severe disabilities. Competing system demands may therefore compromise the harmonious relationship that should exist between research, policy and practice.

### **Implications for Research, Policy and Practice**

The discrete elements of the CPD programme that emerged during the evaluation are isolated in accordance with the areas suggested by Guskey (2000) and Muijs et al.

(2004) and the associated implications for research, policy and practice presented below.

### **Antecedent Level**

**Table 42. Antecedent Level**

Motivation and Reasons for Choice of Programme  
Prior Professional Experiences  
Attitudes to New Professional Challenges

High levels of motivation, a proactive approach to new professional challenges by all ten teachers, prior professional experiences and personal biographies appeared to be influential factors that impacted on teachers' attitude to their work. While these findings may be peculiar to this research population, nevertheless they identify important elements that the literature suggests may influence teachers' practice (Measor, 1985; Firestone and Pennell, 1993; Hargreaves, 1998; Brownell and Pajares, 1999; Avramidis and Norwich, 2002; Lindsay, 2007). The apprehension at the establishment of the class was identified as a factor in choosing to participate in the programme for five teachers in mainstream schools where no previous provision had been in place for pupils with ASDs. This was further corroborated by principal and focus-group interview data in these schools. Deficiencies related to special education input in ITE were also identified as a factor, which prompted teachers to access the post-graduate certificate programme. However the research has also identified a need to provide a greater level of input in CPD programmes that affirms the effectiveness of teachers' existing knowledge, understanding and skills in meeting the needs of pupils with ASDs. This is also related to the finding at Level Two in relation to teachers' use of common pedagogic approaches. The findings at the antecedent level are commensurate with the construct of the co-existence of survival and discovery for teachers at the launching phase of their career (Huberman, 1989; 1995). The author suggests that discovery assists the teacher in tolerating the tensions related to survival. In order to assist in ensuring that the concept of discovery transcends the tensions generated by survival, an analysis of the Antecedent Level suggests that the following should be considered:

- Publication of guidelines to assist schools at the initial establishment of provision for pupils with ASDs.
- Exploring the possibility of increasing input on special education in ITE programmes.
- Providing input in CPD programmes that affirms the effectiveness of teachers' existing knowledge, understanding and skills in meeting the needs of pupils with ASDs.

### **Level One: Appropriateness of Content and Process**

**Table 43. Level One: Appropriateness of Content and Process**

Content  
Process

All teachers affirmed the content and process of the post-graduate certificate programme. Engaging with external experts, parental experiences and the views of individuals with ASDs were expressly referred to and identified as valued outcomes of the programme. The potential of the programme as a stimulus for further learning and its contribution to the creation of a learning community of discourse and practice were highlighted (Guldberg and Pilkington, 2007). This confirms the applicability and potential contribution of a socio-cultural learning approach to the acquisition of the complex and evolving professional knowledge, understanding and skills required to teach pupils with ASDs. The literature review also suggests that a community's professional practice is enriched through sharing common interests, knowledge, experience, concerns, values and exchanges centred on problems that emerge in their work (Guldberg and Pilkington, 2006). This has the potential to be of particular significance to teachers of pupils with ASDs as there is no definitive research that can match a child to a particular approach and consequently there is a need to carefully describe each individual pupil's characteristic in providing appropriate interventions (Koegel and Brown, 2007).



The enabling approach adopted by tutors on the post-graduate programme was affirmed and contrasted with the negative experiences of three teachers in relation to another CPD programme. The research findings suggest that the knowledge and understanding demonstrated by teachers who had not completed the programme were related to their teaching experiences, the content of other CPD programmes they had accessed in addition to the range of epistemological bricolage individual teachers had engaged in.

The value of a supervised practicum in developing teachers' practice was acknowledged in addition to its potential to general stress and anxiety. The literature review and research findings identified no empirical evidence that definitively confirms the positive influence of a practicum on teachers' practice (Moon, 1999). However the concept of the practicum can be linked to the alternative model of teacher change proposed by Guskey (2002), where he considers that there is an adequate evidence-base to support the idea that change is primarily an experientially based learning process for teachers that is linked to observations of improvement in student learning. Guskey suggests that in order for the use of new practices to be sustained, teachers will need to receive regular feedback on the effects of their practice. The practicum therefore provides an appropriate mechanism for an initial step in this process. The analysis of data at Level One suggests that the following should be considered:

- External experts, parental experiences and the views of individuals with ASDs are a valued outcome of participating in the programme and should be a feature of CPD for teachers of pupils with ASDs.
- Communities of discourse and practice should be promoted in CPD programmes.
- The practicum should be managed in a sensitive manner that optimises learning and promotes meaningful professional dialogue between tutor and teacher.
- The provision of regular feedback for teachers on the effects of their practice should be considered in the provision of CPD programmes.

- A directory of quality accredited and non-accredited appropriate and effective ASD-CPD should be compiled and made accessible for teachers.

## **Level Two: Participants' Cognitive, Affective and Behavioural Learning**

**Table 44. Level Two: Participants' Cognitive, Affective and Behavioural Learning**

Knowledge and Understanding of Autistic Spectrum Disorders

Classroom Organisation

Accommodation of the Triad of Impairments

Curriculum and Teaching Approaches

Participation in the post-graduate certificate programme yielded cognitive, affective and behavioural learning outcomes. Cognitive learning was identified as the acquisition of a broad theoretical base related to a knowledge and understanding of ASDs. This represents a valued outcome of participating in the programme as the literature has identified the acquisition of a broad theoretical base as essential to ensuring that teachers' are not disempowered by approaches that provide them with a range of isolated and decontextualised splinter skills (Powell and Jordan, 1997) . In contrast the knowledge and understanding of the teachers who had not completed the programme were related to their prior teaching experiences, the CPD they had accessed and individual epistemological bricolage. All teachers' knowledge and understanding in relation to ASD differed in its translation to practice. This highlights the limitations identified in the literature review of the difficulty involved in precisely identifying the effects of CPD on teachers' practice due to a range of complex intervening variables (Hargreaves, 1998; Days and Sachs, 2004). The research findings corroborate the observations of the authors that factors such as expertise, capability, personal and professional biography, situational, emotional and psychological factors, the heterogeneous needs of pupils and changes over time and circumstance, affect teacher effectiveness.

Affective learning outcomes of participating in the programme were identified as stemming from engaging with parental experiences, exploring the biographies of

individuals with ASDs, the potential of the programme as a stimulus for further learning and the possibilities of participating in learning communities of discourse and practice. Participation in the programme may also have contributed to teachers' high levels of motivation. Behavioural learning was evident in the manner in which teachers who had completed the programme consistently directed attention to mitigating the social deficits of the triad of impairments.

No significant variation was evident between the observed behaviours of teachers who had completed the programme and those who had not in relation to classroom organisation, accommodation of the communication and the rigidity and thought behaviours of the triad of impairments. All teachers were confident in their knowledge of curriculum and considered that they implemented a curriculum, which was based on the individual needs of each pupil. The research findings suggest that the principles of the Primary School Curriculum concerning the uniqueness of each child, ensuring the development of the child's full potential, the role of the environment, guided activity, experiential and discovery learning, the developmental nature of learning, the centrality of language and the cultivation of the social, emotional and aesthetic dimensions have direct applicability to the learning and teaching of pupils with ASDs (NCCA, 1999). The research findings also suggest that individual curriculum areas have the potential to constructively support learning for pupils with ASDs. However research findings concur with Jordan (2005) in concluding that curriculum access for pupils with ASDs is dependant on common curricular goals, content and contexts being mediated through an understanding of group and individual differences. Additionally the literature review and the research findings confirm that many pupils with ASDs show some disposition to towards music and suggest that Music can be accessed as a subject in itself and also to enhance learning in other curriculum areas (Heaton et al., 1999; Qualifications, Curriculum and Assessment Authority for Wales, 2000; Brownell, 2002; Pasiali, 2004; Curry, 2005; Kern et al., 2007; Allen et al., 2009).

The use of common, group and individual pedagogic approaches were a feature of all teachers' practice. Common pedagogic approaches related to clarity in the learning and teaching process, teacher expectations, approaches linked to the Primary School

Curriculum, prompting systems and Music were used in implementing learning and teaching programmes. All teachers had a clear understanding of the importance of adopting a counter-intuitive approach to their teaching and no teacher used one group-pedagogic approach exclusively to the exclusion of others. Significantly the research findings indicate the possibility of incorporating the strategies used in behavioural approaches in naturalistic classroom settings and that these strategies are not incompatible with common pedagogic approaches. The findings indicate that it is critical that teachers are in a position to adopt an individualised responsive ASD-pedagogy that incorporates an understanding of the common pedagogic needs of all learners combined with an understanding of the group-pedagogic needs of learners with ASDs (Jordan and Powell, 1993). The authors consider that while responsive pedagogy will often constitute counter-intuitive teaching, it should remain firmly rooted in an understanding of the nature of all learners and how they learn. This further confirms the research findings in relation to the key role of common pedagogic approaches for pupils with ASDs. The analysis of data at Level Two suggests that:

- Accessible professional support should be available to all teachers to ensure that their knowledge and understanding of ASDs continues to translate into practice.
- Continuing professional development programmes should promote the importance of mitigating the social deficit of the triad of impairments.
- Further research is required to investigate the impact of classroom organisation on the engagement and learning outcomes of pupils with ASDs.
- Research should be conducted on the role of the curriculum in contributing to learning outcomes for pupils with ASDs.
- The potential of mitigating the deficits associated with the triad of impairment through the curriculum should be researched.
- Research focused specifically on isolating the elements of common and ASD-group teaching approaches that can be successfully used in optimising outcomes for pupils with ASDs should be conducted.

- The contribution of Music to the learning and teaching programmes of pupils with ASDs should be further researched.
- Developing curriculum guidelines for teachers in junior classes and post-primary schools for pupils with ASDs should be considered.

### **Level Three: Organisational Support and Change**

**Table 45. Level Three: Organisational Support  
Change**

***Organisational Support***

The Role of the Principal  
Support of Teaching Colleagues  
Multi-Disciplinary Support  
Special Needs Assistants

***Organisational Change***

Developing Staff's Knowledge and Understanding of  
Autistic Spectrum Disorders  
Facilitating the Development of an Inclusive School  
Ethos  
Acknowledgement of Teachers' Expertise

The administrative, management and instructional duties of school principals, the role of teachers in mainstream classes in supporting the inclusion of pupils with ASD, the potential contribution of multi-disciplinary support and the importance of effective management of SNAs were identified as key organisational supports for ASD classes. Principals articulated a need for guidance and support in establishing a class for pupils with ASDs in their schools. The role of the principal featured extensively in the interview data of the six teachers who had completed the post-graduate certificate programme, which suggests that the programme may contribute to highlighting the importance of promoting the principal's role in the class. The important role of teachers in mainstream classes in supporting the inclusion of pupils with ASDs was identified. Teachers who had completed the programme referred more often to multi-disciplinary support and articulated the possibilities inherent in adopting a multi-disciplinary approach. This suggests that participation in the programme may provide teachers with a broad knowledge and understanding of the

potential impact of multi-disciplinary support on pupils' educational provision. While the literature review identified a lack of empirical evidence with regard to the impact of multi-disciplinary support in educational contexts, prominent expert reports highlighted the importance of multi-disciplinary support in meeting the needs of pupils with ASDs (DES, 2001; National Research Council, 2001a; DES, 2006a; Parsons, et al., 2009; SIGN, 2007). The research findings corroborate studies conducted in the Irish context and affirm the value of the role of the SNA to schools while also identifying challenges in relation to the role (Lawlor, 2002; Carrig, 2004; Elliot, 2004). The importance of clarification both officially and within schools in relation to the roles and responsibilities of SNAs was articulated. The need for input at ITE, induction and CPD level for teachers in the effective management of SNA-support was referred to. Considerable reference was made to the necessity of providing SNAs with CPD related to their roles and responsibilities.

The research findings suggest that a cascade effect of engaging in the post-graduate certificate programme is identifiable in relation to the development of staff's knowledge and understanding of ASDs, facilitating the development of an inclusive school ethos and a recognition of teachers' expertise. Teachers who had completed the programme assisted in developing staff's knowledge and understanding of pupils with ASDs through input at staff meetings, informally and through direct on-site CPD for SNAs. In contrast, in schools where teachers had not completed the programme, staff's knowledge and understanding were developed through the use of existing in-school expertise and external CPD providers. It is significant that in three schools where teachers had not completed the programme, there were other teachers and in one school, a principal, who had previously completed the programme. These staff members were explicitly referred to as assisting the three research participants. An analysis of the data suggests that participation in the post-graduate programme can potentially contribute to facilitating an inclusive school ethos and developing other teachers' awareness of the needs of pupils with ASDs. These were at a more advanced level of development in schools where both the principal and class teacher were actively involved in the process and where structured collaborative planning and activities were a feature of practice. The specific references made by principals of teachers who had completed the post-graduate programme to the expertise in the

classes suggests that participation in the programme assists in developing teachers' professional credibility in the school. The identification of a cascade effect is particularly significant in view of the findings of the literature review related to the importance of all staff working with individuals with ASDs having ASD-specific knowledge and understanding (Jones et al., 2008). The analysis of data at Level Three suggests the following:

- There is a need for clear directions and support to assist principals at the initial establishment of a class for pupils with ASDs.
- All teachers in the school should be provided with access to CPD in order to develop a knowledge and understanding of ASDs.
- Official clarification is required with regard to the roles and responsibilities appropriate for SNAs in supporting pupils with ASDs.
- The effective management of SNA-support should be a feature of initial, induction and CPD for teachers.
- CPD related to the role of the SNA in classes for pupils with ASDs should be provided.

#### **Level Four: Participants' Use of Knowledge and Skills**

<b>Table 46. Level Four: Participants' Use of Knowledge and Skills</b>
Heterogeneous Needs
Assessment
Individualised Planning
Liaising with Parents

Due to the limitations inherent in evaluating the effects of CPD on teachers' practice previously referred to, it was not possible to identify the precise impact of the post-graduate certificate programme on teachers' use of knowledge and skills. All ten teachers demonstrated an understanding of the individual needs of each pupil, the role of assessment, the need for individualised planning and the importance of

liaising with parents. These areas were identified in the literature review as key components in the education of pupils with ASDs (Kurtzig, 1986; Jordan and Powell, 1995; NIASA, 2003; Hagedorn, 2004; Hammond et al., 2006; Jung et al., 2008; Parsons et al., 2009). However the finding in relation to assessment and individualised planning is limited by the fact that pupils' individual plans were not examined as part of the research process. The broad theoretical knowledge of ASDs acquired by participants in the programme may contribute positively to teachers' understanding of pupils' individual needs and their communication with parents. The in-depth knowledge of the process of individualised planning by teachers who had participated in the programme suggests that this may be a valued outcome of participating in the programme. There was a sense that all teachers would benefit further from CPD on assessment. The analysis of data at Level Four suggests that the following should be considered:

- A focus on heterogeneous needs, assessment, individualised planning and liaising with parents should be a feature of CPD programmes for teachers of pupils with ASD.

#### **Level Five: On-Task Behaviour**

Pupils' on-task behaviour was analysed based on the premise that the on-task pupil is more likely to see and hear important instruction and the teacher is more likely to use instructional strategies associated with increased on task-behaviour (Heward et al., 1996). While the analysis was limited by the heterogeneity of pupils, the lack of specific data on individual pupils, the variety of pupil:teacher ratios, the different levels of SNA-support and the duration of the observation period, a number of significant findings emerged.

The research findings indicate that common, group and individual pedagogic approaches combined with the practical application of a theoretical understanding of ASDs contribute to maintaining pupil's on-task behaviour. Pupils' on-task behaviour was not related to the CPD programme accessed by teachers but rather was related to the presence of factors linked to the effective management of pupils' behaviour. Direct similarities were evident between the effective management of pupils'



behaviour, pupils' active engagement in meaningful learning activities, the promotion of independent learning, the use of behaviour management strategies that considered the implications of the triad of impairments and the availability and appropriate use of a wide range of learning and teaching resources. A high degree of similarity was evident between the effective management of pupils' behaviour and classroom organisation, consideration of the visual learning modality of pupils' with ASDs, the implications of the sensory and perceptual sensitivities of pupils' with ASDs, the use of a range of teaching approaches and strategies and the effective management of SNA-support.

All teachers used various elements of ASD-specific group pedagogic approaches in maintaining pupils' on-task behaviour, which suggests that CPD should provide teachers with the knowledge and understanding of a range of approaches to meet the needs of all learners with ASDs. This finding confirms the conclusion of Parsons et al. (2009) that there is currently no evidence that a single intervention or solution will meet the needs of all learners with ASDs. The findings further highlight the criticality of teachers acquiring a knowledge and understanding of effective ASD-specific group pedagogy and applying this with reference to the pedagogic needs of individual pupils (Jordan, 2005). The analysis of data at Level Five suggests that the following should be considered:

- Teachers require a repertoire of strategies based on common, group and individual pedagogic needs combined with the practical application of a broad theoretical understanding of ASDs in order to maintain pupils' on-task behaviour.
- Further research is necessary in order to isolate the relative contribution of the distinctive elements identified to the effective management of pupils' behaviour.

### **Additional Emerging Issues**

Additional emerging issues related to Teacher Articulation, Litigation and the Media, the SESS, Probationary Teachers and the need to Extend the Availability of ASD CPD were unexpected findings, which made a valuable contribution to the research.

Additional emerging issues related to Music and ASD-Specific Approaches are combined with the analysis at Level Two above.

**Table 47. Additional Emerging Issues**

Teacher Articulation  
Autistic Spectrum Disorder-Specific Approaches  
Music  
Litigation and the Media  
Special Education Support Service  
Probation  
Pupil and Sibling Awareness  
Extending the Availability of Continuing Professional Development

Difficulties were identified by teachers in articulating their practice and connecting it to their ITE programmes and their prior experiences of teaching. McIntyre (2009) emphasises the role of pedagogical discourse in enabling student teachers to learn to engage in serious and informed intellectual analysis of their teaching. It is suggested that this is particularly applicable to programmes of CPD for teachers of pupils with ASDs, where a counter-intuitive approach to generic teaching skills is required.

The threat of litigation and reporting in the media presented as a source of stress for class teachers and principals, regardless of the nature of the CPD that they had accessed. However two teachers who had completed the post-graduate certificate programme expressly related parental satisfaction to worrying less about the threat of litigation and one teacher who had completed the programme stated that the possibility of litigation didn't impact on her. The findings suggest the need to adopt principles such as those suggested by Scheffel et al. (2005) in order to provide a safeguard in the event of litigation proceedings. The authors advise an understanding of the law and regulations, the expertise of individual education plan-team members, the commitment of the school to pupils with special educational needs, access to competent personnel with knowledge of the child's special educational need and the availability of credible data documenting the child's progress should be features of the school's special education policy.

The role of the SESS in providing CPD for teachers was considered in a positive manner. While teachers in their probationary year were viewed as being able to provide appropriate learning and teaching experiences for pupils with ASDs, it was also suggested that additional support in relation to planning, recording and monitoring pupils' learning was required. The positive impact of a pupil and sibling ASD awareness programme in one school suggests that developing programmes of awareness should be developed further and highlighted in CPD programmes. The importance of class teachers, learning support teachers and principals being provided with access to ASD-specific CPD was highlighted, which further corroborates the views expressed by Jones et al, 2008 and Parsons et al., 2009. The analysis of data related to Additional Emerging Issues suggests that the following should be considered:

- Ensuring CPD programmes encourage and support teachers in articulating their classroom practice.
- Guidelines with regard to the management of special education litigation should issue from management bodies, in order to assist in alleviating the stress caused for schools both by the threat of litigation and reporting in the media.
- Further research is required on the impact of the SESS on practice in schools.
- Additional support in relation to planning, recording and monitoring pupils' learning and accessing relevant programmes of CPD is required for teachers of pupils with ASDs who are on probation.
- Developing programmes of awareness and sibling programmes in relation to ASDs should be encouraged in CPD programmes.

### **Limitations of the Study**

The research findings are compromised by a number of limitations, which should be considered in interpreting the research findings and should be addressed in any future replication of this research. The sampling process adopted for this study and the resultant selection and profile of teachers and schools may not be representative of the overall target population and therefore may compromise the generalisability of

the findings. The particular school contexts in which teachers were teaching may also have influenced the findings through the impact of enrolment policies, pupil enrolment and existing on-site experience and expertise. Five of the six teachers who had completed the post-graduate certificate programme were teaching in ASD-classes located in mainstream schools and one teacher was teaching in a special school for pupils with severe to profound general learning disabilities. The four teachers who had not completed the post-graduate programme were teaching in a special school for pupils with mild general learning disabilities, an ASD-specific school, and two schools for pupils with moderate and severe to profound general learning disabilities combined. In particular the high levels of teachers' motivation that were evident may be peculiar to this research population. However while I have not engaged in random sampling, I have paid particular attention to meticulously recording the characteristics of the research population, the environment in which the research was conducted, the nature of the special education process, measurement and data and ethical and moral considerations.

A number of methodological decisions were made based on expediency and the time-frame available for the research, which may have potentially impacted on data collection and analysis. The decision to include six schools where teachers had completed the post-graduate certificate programme and four schools where teachers had not completed the programme, may have created a bias in favour of a greater volume of data codes emerging from those teachers who had completed the programme. I deliberately chose not to examine teachers' documentation in view of my role as a DES inspector and the requirements of the DES with regard to teachers' planning. This decision restricts the findings of the research in relation to proficiency with regard to individualised planning emerging as a valued outcome of the research for those teachers who had participated in the post-graduate programme.

The literature and research findings have further highlighted the heterogeneous needs of pupils with ASDs, which may further contribute to the difficulties inherent in generalising the research findings as they may represent the particular response of teachers and schools to particular pupil populations.

While I adopted trustworthiness procedures to reduce the potential of my views, opinions, knowledge, experience and biases from impacting on the research, the total purification and neutralisation of these are impossible and should be allowed for in interpreting the research findings. My role as an inspector and my advisory role in relation to the SESS may have also potentially affected participants' responses. However the research benefitted from my insider knowledge of the DES in enabling me to source documents and information that a researcher with no such knowledge would be unaware of.

### **Conclusion**

The research has fulfilled the aims of qualitative research in producing evidence-based findings related to the exploration of specific contexts and individuals and the quantitative elements employed have further enhanced this process (Brantlinger et al. (2005). The aim of this research study in relation to evaluating the effects of a post-graduate ASD CPD programme, on practice in six schools and ascertaining whether a cascade effect on school practice could be established has been achieved. Future research has the potential to enhance the impact of these findings through replicating this study. In addition to the implications outlined above, future research should consider the impact of ASD-specific CPD on educationally and socially significant outcomes for pupils with ASDs. It is also suggested that social validation to elicit the views of all stakeholders including pupils with ASDs, families, teachers and multi-disciplinary professionals is employed in future attempts to replicate this research. In order to optimise the potential impact of the research findings on policy development, I will distribute a copy of the findings to Teacher Education Section and Special Education Section of the DES. The experience of engaging in the research will continue to influence my work in advising the DES with regard to policy development and in evaluating and advising schools. I will also submit relevant sections of the work for consideration by peer-review journals. The research findings have highlighted the criticality of ASD-specific CPD for all teachers to assist them in meeting the learning and teaching needs of pupils with ASDs. The findings have the potential to impact positively on teachers, pupils with ASDs and their families through contributing to an understanding of the issues related to the

provision of ASD-specific CPD for teachers and providing direction for future systemic development.

## REFERENCES

- Aarons, M. and Gittens, T. (1998) *A Social Skills Approach for Children and Adolescents*, Bicester: Winslow Press.
- Agnosta, E., Graetz, J.E., Mastropieri, M.A. and Scruggs, T. E. (2004) Teacher-Researcher Partnerships to Improve Social Behaviour Through Social Stories, *Interventions in Schools and Clinics*, Vol. 19 (5), pp. 276-287.
- Ainscow, M. (1993) Towards Effective Schools for All. In Special Educational Needs Policy Group *Policy Options for Special Educational Needs in the 1990s, Seminar Paper 2, Towards Effective Schools for All*, Stafford: The National Association for Special Needs (NASEN), pp. 4-18.
- Ainscow, M. (1995) Education for All: Making it Happen, *Support for Learning*, Vol. 10 (4), pp. 147-155.
- Ainscow, M. and Tweddle, D. (1998) *Encouraging Classroom Success*, London: David Fulton Publishers.
- Alberto, P.A. and Troutman, A.C. (2006) *Applied Behaviour Analysis for Teachers* (7<sup>th</sup> ed.), New Jersey: Pearson Merrill Prentice Hall.
- Alderson, P. and Goody, C. (1999) Autism in Special and Inclusive Schools: There Has to be a Point to Their Being There, *Disability and Society*, Vol. 14 (2), pp. 249-261.
- Algozzine, B. (2003) Scientifically Based Research: Who Let the Dogs Out, *Research and Practice for Persons with Severe Disabilities*, Vol. 28 (3), pp. 156-160.
- Allen, R., Hill, E. and Heaton, P. (2009) "Hath charms to soothe..." An Exploratory Study of How High-Functioning Adults with ASD Experience Music, *Autism*, Vol. 13 (1), pp. 21-41.
- Allard, A. (2009) *The All-Party Parliamentary Group on Autism. Transition into Adulthood. Inquiry into Transition to Adulthood for Young People with Autism*, London: National Autistic Society.
- American Psychiatric Association (APA) (2000) *Diagnostic and Statistical Manual of Mental Disorders* (4<sup>th</sup>ed) *Text Revision (DSM-IV-TR)*, Washington: APA.
- Andrews, J.E., Carnine, D.W., Coutinho, M.J., Edgar, E.B., Forness, S.R., Fuchs, L.S., Jordan, D., Kauffman, J.M., Patton, J.M., Paul, J., Rosell, J., Rueda, R., Schiller, E., Skrtic, T.M. and Wong, J. (2000) Bridging the Special Education Divide, *Remedial and Special Education*, Vol. 21 (5), pp. 258-260, p.267.

- Ashdown, J. (2001) Professional Development as Interference: Insights from the Reading Recovery In-service Course, In Sugrue, C. and Day, C. (eds) *Developing Teachers and Teaching Practice: International Research Perspectives*, London: Routledge, pp. 116-129.
- Asperger, H. (1979). Problems of Infantile Autism, *Communication*, Vol. 13, pp. 45-52.
- Association of Secondary Teachers of Ireland (ASTI) (2010) *National Council for Special Education*, Accessed online on Monday 25<sup>th</sup> January 2010 at <http://www.asti.ie/operation-of-schools/outside-agencies/national-council-for-special-education/>
- Aston, P. (2006) How I Got to Keep Listening, *Good Autism Practice*, Vol. 7 (1), p. 43.
- Atkinson, P. and Delamont, S. (2005) Analytic Perspectives. In Denzin, N.K. and Lincoln, Y.S. (eds) *The Sage Handbook of Qualitative Research* (3<sup>rd</sup>ed), Thousand Oaks, Sage Publications, pp. 821-840.
- Atkinson, D., Jackson, M. and Walmsley, J. (1997) *Forgotten Lives: Exploring the History of Learning Disability*, Kidderminster: BILD Publications.
- Attwood, T. (1998) *Asperger's Syndrome*, London: Jessica Kingsley Publishers.
- Autism Europe (2006) *Autism and Case Law: Protecting the Right to Education for Children with Autism Spectrum Disorders*, Brussels: Autism Europe.
- Autism Working Group (2002a) *Autistic Spectrum Disorders: Good Practice Guidance: 01 Guidance on Autistic Spectrum Disorders*, Nottingham: Department for Education and Skills (DfES).
- Autism Working Group. (2002b) *Autistic Spectrum Disorders: A Guide to Classroom Practice*, Belfast: Department of Education.
- Avramidis, E. and Norwich, B. (2002) Teachers' Attitudes Towards Integration/Inclusion: A Review of the Literature, *European Journal of Special Needs Education*, Vol. 17 (2), pp. 129-147.
- Baer, D.M., Wolf, M.M. and Risley, T.R. (1968) Some Current Dimensions of Applied Behaviour Analysis, *Journal of Applied Behaviour Analysis*, Vol.1, pp. 91-97.
- Baer, D.M., Wolf, M.M. and Risley, T.R. (1987) Some Still-Current Dimensions of Applied Behaviour Analysis, *Journal of Applied Behaviour Analysis*, Vol. 20, pp. 313-328.
- Baker, J. (2001) *The Social Skills Picture Book*, Arlington: Future Horizons Inc.



- Baldwin, P. (2009, 12<sup>th</sup> November) *The Views of the Authorities on Inclusive Education, International Conference Salamanca-15 Years on, Inclusion-A School for all*, Conference, The Grand Hotel, Malahide, Dublin.
- Balfe, T. (2001) A Study of the Induction Experiences and the Needs of Teachers New to Autistic Spectrum Disorders in the Republic of Ireland, *Good Autism Practice*, Vol. 2 (2), pp. 75-86.
- Ball, S.J. (1993) Self Doubt and Soft Data: Social and Technical Trajectories in Ethnographic Fieldwork. In Hammersley, M. (ed.) *Educational Research: Current Issues*, London: Paul Chapman, pp. 32-48.
- Balshaw, M. and Farrell, P. (2002) *Teaching Assistants: Practical Strategies for Effective Classroom Support*, London, David Fulton Publishers.
- Baranek, G.T. (1999) Autism During Early Infancy: A Retrospective Video Analysis of Sensory-Motor and Social Behaviours at 9-12 Months of Age, *Journal of Autism and Developmental Disorder*, Vol. 29 (3), pp. 213-224.
- Baron-Cohen, S. (1995) *An Essay on Autism and Theory of Mind*, Cambridge: Massachusetts Institute of Technology.
- Baron-Cohen, S. and Bolton, P. (1993) *Autism: The Facts*, New York: Oxford University Press Inc.
- Baron-Cohen, S., Leslie, A.M. and Frith, U. (1985) Does the Autistic Child have a "Theory of Mind"?, *Cognition*, Vol. 21, pp. 37-46.
- Barrett, M. (2006) Like Dynamite Going Off in My Ears: Using Autobiographical Accounts of Autism with Teaching Professionals, *Educational Psychology in Practice*, Vol. 22 (2), pp. 95-110.
- Bartak, L. (1993) Introduction. In Williams, D. *Nobody Nowhere*, London: Corgi Books, pp. xi-xvi.
- Bays, D.A. and Crockett, J.B. (2007) Investigating Instructional Leadership for Special Education, *Exceptionality*, Vol. 15 (3), pp. 143-161.
- Behl Wulff, S. (1985) The Symbols and Object Play of Children with Autism: A Review, *The Journal of Autism and Developmental Disorders*, Vol. 15 (2), pp. 139-148.
- Benz, M.R., Lindstrom, L. and Yovanoff, P. (2000) Improving Graduation and Employment Outcomes of Students with Disabilities: Predictive Factors and Student Perspectives, *Exceptional Students*, Vol. 66, pp. 509-529.
- Bernard-Opitz, V., Ing, S. and Kong, T.Y. (2004) Comparison of Behavioural and Natural Play Interventions for Young Children with Autism, *Autism*, Vol. 8 (3), pp. 319-333.

- Best, J.W. and Kahn, J.V. (1993) *Research in Education* (7<sup>th</sup>ed), Needham Heights: Allyn and Bacon.
- Bettleheim, B. (1967) *The Empty Fortress, Infantile Autism and the Birth of Self*, Toronto: Collier MacMillan.
- Beyer, J. and Gammeltoft, L. (2000) *Autism and Play*, London: Jessica Kingsley Publishers.
- Bhaskar, R. (1975) *A Realist Theory of Science*, London: Verso.
- Birnbrauer, J.S. and Leach, D.J. (1993) The Murdoch Early Intervention Program After Two Years, *Behaviour Change*, Vol. 10, pp. 63-74.
- Bishop, D.V.M., Whitehouse, A.J.O., Watt, H.J. and Line, E.A. (2008) Autism and Diagnostic Substitution: Evidence From a Study of Adults with a History of Developmental Language Disorder, *Developmental Medicine and Child Neurology*, Vol. 50 (5), pp. 341-345.
- Black, D. (2002) A Typical School Day. In Bondy, A.S. and Sulzer-Azaroff, B. (eds.) *The Pyramid Approach to Education in Autism*, Newark: Pyramid Educational Products, Inc., pp. 211-236.
- Black, P. and Williams, D. (1998) *Inside the Black Box. Raising Standards Through Classroom Assessment*, London: Kings College School of Education.
- Blamires, M. (2001) Social Stories. In The National Autistic Society (ed.) *Approaches to Autism*, London: The National Autistic Society, p.63.
- Blase, J. and Blase, J. (2000) Effective Instructional Leadership: Teachers' Perspectives on How Principals Promote Teaching and Learning in Schools, *Journal of Educational Administration*, Vol. 38 (2), pp. 130-41.
- Blatchford, P., Bassett, P., Brown, P., Koutsoubou, M., Martin, C., Russell, A., Webster, R. and Rubie-Davies, C. (2009) *Deployment and Impact of Support Staff in Schools*, London: Institute of Education, University of London.
- Blatt, B. (1981) The Emperor Would Rather Get it Over With, *Journal of Learning Disabilities*, Vol. 14 (2), pp. 103-105, p. 110.
- Bledsoe, R., Smith-Myles, B. and Simpson, R.L. (2003) Use of a Social Story Intervention to Improve Mealtime Skills of an Adolescent with Asperger Syndrome, *Autism*, Vol. 7 (3), pp. 289-295.
- Bogdan, R. and Taylor, S.J. (1975) *Introduction to Qualitative Research Methods*, New York: Wiley.
- Bogdashina, O. (2003) *Sensory Perceptual Issues in Autism and Asperger Syndrome*, London: Jessica Kingsley Publishers.

- Bogdashina, O. (2006) Autistic Accounts of Sensory-Perceptual Experiences: Should we Listen? *Good Autism Practice*, Vol. 7 (1), pp. 1-12.
- Bolam, R. and McMahon, A. (2004) Literature, Definitions and Models: Towards a Conceptual Map. In Day, C. and Sachs, J. (eds.) *International Handbook on the Continuing Professional Development of Teachers*, Maidenhead: Open University Press, pp. 33-63.
- Bonds, C.W. and Lindsey, J. (1982) The Principal in Special Education: The Teacher's Perspective, *Education*, Vol. 102 (4), pp. 407-410.
- Bondy, A. and Frost, L. (2002) *A Picture's Worth. PECS and Other Visual Communication Strategies in Autism*, Bethesda: Woodbine House.
- Bondy, A.S. and Sulzer-Azaroff, B. (2002) *The Pyramid Approach to Education in Autism*, Newark: Pyramid Educational Products, Inc.
- Booth, T., Ainscow, M. and Dyson, A. (1997) Understanding Inclusion and Exclusion in the English Competitive Education System, *International Journal of Inclusive Education*, Vol. 1 (4), pp. 337-355.
- Borba, M.F. (2009) From Teacher to Administrator: What Does it Take?, *Principal*, Vol. 88 (5), pp. 53-54.
- Borthwick-Duffy, S.A. (1992) Quality of Life and Quality of Care in Mental Retardation. In Rowitz, L. (ed.) *Mental Retardation in the Year 2000*, Berlin: Springer-Verlag, pp. 52-66.
- Boscardin, M.L. (2007) What is Special About Special Education Administration?: Considerations for School Leadership, *Exceptionality*, Vol. 15 (3), pp. 189-200.
- Boucher, J. (1996) The Inner Life of Children with Autistic Difficulties. In Varma, V. (ed.) *The Inner Life of Children with Special Needs*, London: Whurr Publishers Ltd, pp. 81-94.
- Bowler, D. (2007) *Autism Spectrum Disorders: Psychological Theory and Research*, Chichester: John Wiley and Sons Ltd.
- Bransford, J., Darling-Hammond, L. and Le Page, P. (2005) Introduction. In Darling-Hammond, L. and Bransford, J. (eds.) *Preparing Teachers for a Changing World*, San Francisco: Jossey-Bass, pp. 1-39.
- Brantlinger, E., Jimenez, R., Klinger, J. and Richardson, V. (2005) Qualitative Studies in Special Education, *Exceptional Children*, Vol. 71 (2), pp. 195-207.
- Brighton and Hove City Council (2009) *Autistic Spectrum Condition Support Service*, Accessed online on Friday 29<sup>th</sup> November 2009 at <http://www.brighton-hove.gov.uk/index.cfm?request=c1001064>

- Brooks, K. (2006) An Examination of Assessment Methods to Design Strategies to Develop Language and Communication Skills with a Six-Year-Old Child with ASD, *Good Autism Practice*, Vol. 7 (1), pp. 63-68.
- Brown, A. and Dowling, P. (1998) *Doing Research/Reading Research: A Mode of Interrogation for Education*, London: Falmer Press.
- Brown, S. and McIntyre, D. (1993) *Making Sense of Teaching*, Buckingham: Open University Press.
- Browne, V. (2008) *Hardiman's Criticisms of the Media are Well Founded*, Accessed online on Saturday 27<sup>th</sup> December 2008 at [http://www.irishtimes.com/news/paper/opinion/2008/1203/122823\\_4990833.html](http://www.irishtimes.com/news/paper/opinion/2008/1203/122823_4990833.html).
- Brownell, M.K. (2002) Musically Adapted Social Stories to Modify Behaviors in Students with Autism: Four Case Studies, *Journal of Music Therapy*, Vol. 39 (2), pp. 117–144.
- Brownell, M.T. and Pajares, F. (1999) Teacher Efficacy and Perceived Success in Mainstreaming Students with Learning and Behaviour Problems, *Teacher Education and Special Education*, Vol. 22 (3), pp. 154-164.
- Brownell, M.T., Ross, D.D., Colón, E.P. and McCallum, C.L. (2005) Critical Features of Special Education Teacher Preparation, *The Journal of Special Education*, Vol. 38, pp. 242-252.
- Bryson, S.E., Koegel, L.K., Koegel, R.L., Openden, D., Smith, I.M. and Nefdt, N. (2007) Large Scale Dissemination and Community Implementation of Pivotal Response Treatment: Programme Description and Preliminary Data, *Research and Practice for Persons with Severe Disabilities*, Vol. 32 (2), pp. 142-153.
- Buehl, M.M. and Fives, H. (2009) Exploring Teachers' Beliefs About Teaching Knowledge: Where Does it Come From? Does it Change?, *The Journal of Experimental Education*, Vol. 77 (4), pp. 367-407.
- Burack, J.A., Iarocci, G., Flanagan, T.D. and Bowler, D.M. (2004) On Mosaics and Melting Pots: Conceptual Considerations of Comparison and Matching Strategies, *Journal of Autism and Developmental Disorders*, Vol. 34 (1), pp. 65-73.
- Burchell, H., Dyson, J. and Rees, M. (2002) Making a Difference: A Study of the Impact of Continuing Professional Development on Professional Practice, *Journal of In-Service Education*, Vol. 28 (2), pp. 219-229.
- Burgess, R.G. (1984) *In the Field. An Introduction to Field Research*, London: Routledge.
- Burke, A. (2000) The Devil's Bargain Revisited: The B. Ed. Degree Under Review, *Oideas*, Vol. 4, pp. 7-58.

- Byers, R. and Rose, R. (1996) *Planning the Curriculum for Pupils with Special Educational Needs: A Practical Guide*, London: David Fulton Publishers.
- Byrne, M. (2008) Individual Education Plans in Irish Schools: Implementation Report of the National Council for Special Education, 2006, *Reach*, Vol. 22 (1), pp. 3-12.
- Byrne, M.M. (1979) *The Origins and Development of Service for the Mentally Handicapped in Ireland 1700-1960 with Special Reference to Educational Provision*, Unpublished M.A. Thesis, Dublin: University College Dublin.
- Calder, I. and Grieve, A. (2004) Working with Other Adults: What Teachers Need to Know, *Educational Studies*, Vol. 30 (2), pp. 113-126.
- Callahan, K., Henson, R.K. and Cowan, A.K. (2008) Social Validation of Evidence-Based Practices in Autism by Parents, Teachers and Administrators, *Journal of Autism and Developmental Disorders*, Vol. 38 (4), pp. 678-692.
- Callahan, K., Shukla-Mehta, S., Magee, S. and Wie, M. (2009) ABA Versus TEACCH: The Case for Defining and Validating Comprehensive Treatment Models in Autism, *Journal of Autism and Developmental Disorders*, Vol. 0 (0), pp. 1-5, published online on Sunday 2<sup>nd</sup> August 2009.
- Campbell, M., Schopler, E., Cueva, J.E. and Hallin, A. (1996) Treatment of Autistic Disorder, *Journal of the American Academy of Child and Adolescent Psychiatry*, Vol. 35 (2), pp. 134-143.
- Carrig, M. (2004) Changing Role of the Special Needs Assistant: Perspectives of a Special School Staff, *Reach*, Vol. 17 (2), pp. 119-126.
- Celani, G., Battacchi, M.W. and Arcidiacono, L. (1999) The Understanding of the Emotional Meaning of Facial Expressions in People with Autism, *Journal of Autism and Developmental Disorders*, Vol. 29 (1), pp. 57-66.
- Center for Disease Control (CDC) (2009) *Morbidity and Mortality Weekly Report*, Accessed online on Monday 1<sup>st</sup> December 2009 at <http://www.cdc.gov/mmwr/pdf/ss/ss5810.pdf>
- Chadwick, D.D. (2008) A Pilot Investigation into the Efficacy of a Signing Training Strategy for Staff Working with Adults with Intellectual Disabilities, *British Journal of Learning Disabilities*, Vol. 37, pp. 34-42.
- Charlop-Christy, M.H., Carpenter, M., Le, L., LeBlanc, L.A. and Kellet, K. (2002) Using the Picture Exchange Communication System (PECS) with Children with Autism: Assessment of PECS Acquisition, Speech, Social-Communication Behaviour, and Problem Behaviour, *Journal of Applied Behaviour Analysis*, Vol. 35 (3), pp. 213-231.

- Charmaz, K. (2005) Grounded Theory in the 21<sup>st</sup> Century: Applications for Advancing Social Justice Studies. In Denzin, N.K. and Lincoln, Y.S. (eds) *The Sage Handbook of Qualitative Research* (3<sup>rd</sup> ed), Thousand Oaks, Sage Publications, pp. 507-535.
- Chazan, M. (1994) The Attitudes of Mainstream Teachers towards Pupils with Emotional and Behavioural Difficulties, *European Journal of Special Needs Education*, Vol. 9 (3), pp. 261-274.
- Children's Rights Alliance, Republic of Ireland (1998) *Small Voices: Vital Rights. Submission to the United Nations Committee on the Rights of the Child*, Dublin: Children's Rights Alliance.
- Claiborne Park, C. (1982) *The Siege: A Family's Journey into the World of an Autistic Child*, Boston: Back Bay Books.
- Clare, A. (1993) Foreword. In Williams, D. *Nobody Nowhere*, London: Corgi Books, pp. ix-x.
- Clark, C.M. and Peterson, P.L. (1986) Teachers' Thought Processes. In Wittrock, M.C. (ed.), *Handbook of Research on Teaching*, New York: Macmillan, pp. 255-297.
- Clarke, S. (2002) *Unlocking Formative Assessment. Practical Strategies for Enhancing Pupils' Learning in the Primary Classroom*, London: Hodder and Stoughton.
- Cohen, H., Amerine-Dickens, M. and Smith, T. (2006) Early Intensive Behavioural Treatment: Replication of the UCLA Model in a Community Setting, *Developmental and Behavioural Pediatrics*, Vol. 27 (2), pp. 133-143.
- Cohen, L., Manion, L. and Morrison, K. (2000) *Research Methods in Education* (5<sup>th</sup> ed), London: Routledge.
- Connor, M. (1998) A Review of Behavioural Early Intervention Programmes for Children with Autism, *Educational Psychology in Practice*, Vol. 14 (2), pp. 109-117.
- Conti-Ramsden, G., Donlan, C. and Grove, J. (1992) Children with Specific Language Impairments: Curricular Opportunities and School Performances, *British Journal of Special Education*, Vol. 19 (2), pp. 75-80.
- Cook, B.G. and Schirmer, B.R. (2003) What is Special About Special Education? Overview and Analysis, *The Journal of Special Education*, Vol. 37 (3), pp. 200-205.
- Cook, T. (1991) The American with Disabilities Act: The Move to Integration, *Temple Law Review*, Vol. 64 (2), pp. 393-469.

- Coolahan, J. (1981) *Irish Education: Its History and Structure*, Dublin: Institute of Public Administration.
- Coolahan, J. (ed.) (1994) *Report on the National Education Convention*, Dublin: The National Education Convention Secretariat.
- Coolahan, J. (2007) The Operational Environment for Future Planning in Teacher Education: OECD and EU Initiatives. In Dolan, R. and Gleeson, J. (eds.) *The Competencies Approach to Teacher Professional Development: Current Practice and Future Prospects*, Armagh: Standing Conference on Teacher Education North and South, pp. 7-14.
- Cordozo, B.N. (1921) *The Nature of the Judicial Process*, New Haven: Yale University Press.
- Costello, M. (1997) *An Investigation into the Provision of Resource Teachers Catering for Pupils with Special Needs Integrated in Irish Primary Schools*, Unpublished Master's Thesis, Dublin: University College Dublin.
- Council of Europe (1950) *European Convention on Human Rights*, Accessed online on Saturday 29<sup>th</sup> March 2008 at <http://www.echr.coe.int/ECHR/EN/Header/Basic+Texts/Basic+Texts/The+European+Convention+on+Human+Rights+and+its+Protocols/>.
- Council of Europe (1996) *European Social Charter (Revised)*, Accessed online on Saturday 29<sup>th</sup> March 2008 at <http://conventions.coe.int/Treaty/Commun/QueVoulezVous.asp?NT=163&CL=EN&NG>.
- Council of Europe (2003) *Improving the Quality of Life of People with Disabilities: Enhancing a Coherent Policy for and Through Full Participation, Malaga (Spain), 7-8 May 2003, Political Declaration*, Accessed online on Monday 24<sup>th</sup> March 2008 at [http://www.coe.int/t/e/social\\_cohesion/soc-sp/CONFMIN-IPH%20\(2003\)%203%20final%20E%20Political%20Declaration.pdf](http://www.coe.int/t/e/social_cohesion/soc-sp/CONFMIN-IPH%20(2003)%203%20final%20E%20Political%20Declaration.pdf).
- Council of Europe (2006) *Recommendation Rec(2006)5 of the Committee of Ministers to Member States on the Council of Europe Action Plan to Promote the Rights and Full Participation of People with Disabilities in Society: Improving the Quality of Life of People with Disabilities in Europe 2006-2015. (Adopted by the Committee of Ministers on the 5<sup>th</sup> of April 2006 at the 961st meeting of the Ministers' Deputies)*, Accessed online on Monday 24<sup>th</sup> March 2008 at [www.coe.int/t/e/social\\_cohesion/soc-sp/Rec\(2006\)5%20Disability%20Action%20Plan.doc](http://www.coe.int/t/e/social_cohesion/soc-sp/Rec(2006)5%20Disability%20Action%20Plan.doc)

- Council of Europe (2007) Resolution ResAP(2007)4 on the Education and Social Inclusion of Children and Young People with Autism Spectrum Disorders. *Adopted by the Committee of Ministers on the 12<sup>th</sup> of December 2007 at the 1014<sup>th</sup> meeting of the Ministers' Deputies*, Accessed online on Monday 24<sup>th</sup> March 2008 at <https://wcd.coe.int/ViewDoc.jsp?id=1226295&Site=CM&BackColorInternet=9999CC&BackColorIntranet=FFBB55&BackColorLogged=FFAC75>.
- Council of Europe (2009a) Recommendation CM/Rec(2009)9 of the Committee of Ministers to Member States on the Education and Social Inclusion of Children and Young People with Autism Spectrum Disorders. *(Adopted by the Committee of Ministers on 21<sup>st</sup> October 2009 at the 1068<sup>th</sup> meeting of the Ministers' Deputies)*, Accessed online on Monday 25<sup>th</sup> January 2010 at <https://wcd.coe.int/ViewDoc.jsp?id=1526657&Site=CM&BackColorInternet=C3C3C3&BackColorIntranet=EDB021&BackColorLogged=F5D383>
- Council of Europe (2009b) *Education and Social Integration of Children and Youth with Autism Spectrum Disorders, Prevalence, Rights, Needs, Provision and Examples of Good Practice*, Strasbourg (In print): The Council of Europe.
- Cox, R. (2006, 27<sup>th</sup>-28<sup>th</sup> April) *The Treatment and Education of Autistic and Related Communication handicapped Children (TEACCH)*, Division TEACCH, North Carolina, Cork: The Oriel House Hotel, Cork.
- Craft, A. (2000) *Continuing Professional Development: A Practical Guide for Teachers and Schools* (2<sup>nd</sup> ed), London, Routledge.
- Crimmins, D.B., Durand, M.V., Theurer-Kaufman, K. and Everett, J. (2001) *Autism Program Quality Indicators: A Self-Review and Quality Guide for Schools and Programmes serving Students with Autistic Spectrum Disorders*, New York: New York State Department of Education.
- Crockett, J.B. (2002) Special Education's Role in Preparing Responsive Leaders for Inclusive Schools, *Remedial and Special Education*, Vol. 23 (3), pp. 157-168.
- Crowley O'Sullivan, J. (2009, 26<sup>th</sup> March) *Special Education Support Service*. Presentation to Education Centre Directors, Education Centre, Enniscorthy.
- Cronin v. The Minister for Education and Science and Others, Ireland, *Judgement Delivered by Ms. Justice Laffoy on the 6<sup>th</sup> July 2004*.
- Curry, J. (2005) *Connections User Guide*, Southsea: Connections Music Company.
- Curtin, P. (2007) Leading the Special Education Challenge, *Intouch*, Issue 89, November 2007, pp. 32-33.
- Daniels, H. (1996) Back to Basics: Three "Rs" for Special Needs, *British Journal of Special Education*, Vol. 23 (4), pp. 166-161.



- Darling-Hammond, L. (2005) Teaching as a Profession: Lessons in Teacher Preparation and Professional Development, *Phi Delta Kappan*, Vol. 87 (3), pp. 237-240.
- Darling-Hammond, L. and McLaughlin, M. (1995) Policies that Support Professional Development in an Era of Reform, *Phi Delta Kappan*, Vol. 76 (8), pp. 597-604.
- Davies, L. and Lacey, P. (2002) The Research Matrix. In Lacey, P. (ed.) *Module Code 1107916, Practitioner Inquiry in Education (PIE), Unit 2: A Worked Example, Distance Education Course: Practitioner Inquiry in Education*, Birmingham: The University of Birmingham, School of Education, pp. 4-10.
- Davis, A. and Rose, D. (2000) The Experimental Method in Psychology. In Breakwell, G.M., Hammond, S. and Fife-Schaw, C. (eds.) *Research Methods in Psychology* (2<sup>nd</sup> ed), London: Sage Publications, pp. 42-58.
- Davis, S., Darling-Hammond, L., La Pointe, M. and Meyerson, D. (2005) *School Leadership Study: Developing Successful Principals*, Stanford: Stanford Educational Leadership Institute.
- Dawson, G. and Osterling, J. (1997) Early Intervention in Autism. In Guralnick, M.J. (ed.) *The Effectiveness of Early Intervention*, Baltimore: Paul H. Brookes Publishing Co. Ltd., pp. 307-326.
- Dawson, G., Rogers, S., Munson, J., Smith, M., Winter, J., Greenson, J., Donaldson, A. and Varley, J. (2010) Randomized, Controlled Trial of an Intervention for Toddlers with Autism: The Early Start Denver Model, *Pediatrics*, Vol. 125 (1), pp. 17-23.
- Dawson, M. (2007, May 6<sup>th</sup>) *The Misbehaviour of Behaviourists: Ethical Challenges to the Autism-ABA Industry*, Accessed online on Sunday 6<sup>th</sup> May 2007 at [http://www.sentex.net/~nexus23/naa\\_aba.html](http://www.sentex.net/~nexus23/naa_aba.html)
- Day, C. (1999) *Developing Teachers: The Challenge of Lifelong Learning*, London: Falmer Press.
- Day, C. and Sachs, J. (2004) Professionalism, Performativity and Empowerment: Discourses in the Politics, Policies and Purposes of Continuing Professional Development. In Day, C. and Sachs, J. (eds.) *International Handbook on the Continuing Professional Development of Teachers*, Maidenhead: Open University Press, pp. 3-32.
- Degli, Espinosa, F. (2001) Behavioural Modification (Lovaas). In The National Autistic Society (ed.) *Approaches to Autism*, London: The National Autistic Society, p.16.
- Delamont, S. (1992) *Fieldwork in Educational Settings, Methods, Pitfalls and Perspectives*, London: The Falmer Press.

- Delamont, S. (2005) Four Great Gates: Dilemmas, Directions and Distractions in Educational Research, *Research Papers in Education*, Vol. 20 (1), pp. 85-100.
- Delamont, S., Coffey, A. and Atkinson, P. (2000) The Twilight Years. Educational Ethnography and the Five Moments Model, *International Journal of Qualitative Studies in Education*, Vol. 13 (3), pp. 223-238.
- Denzin, N.K. (1998) The Art and Politics of Interpretation. In Denzin, N.K. and Lincoln, Y.S, (eds.) *Collecting and Interpreting Qualitative Materials*, Thousand Oaks: Sage Publications, pp. 313-344.
- Denzin, N.K. and Lincoln, Y.S. (2005) Introduction: The Discipline and Practice of Qualitative Research. In Denzin, N.K. and Lincoln, Y.S. (eds.) *The Sage Handbook of Qualitative Research* (3<sup>rd</sup>ed), Thousand Oaks: Sage Publications, pp. 1-32.
- Department of Education (1965) *Rules for National Schools*, Dublin: The Stationery Office.
- Department of Education and Science (DES) (1998) *Major Initiative in Special Education Services: Move marks Breakthrough for Integrated Education and Children with Autism*, Press Release, Thursday 5<sup>th</sup> November 1998, Dublin: DES.
- Department of Education and Science (DES) (1999) *Circular 8/99: Applications for the Services of a Full or Part-time Resource Teacher to Assist a School in Providing Education to Meet the Needs and Abilities of Children with Disabilities*, Dublin: DES.
- Department of Education and Science (DES) (2000a) *Wood Announces Major Initiative to Address Educational Provision for Children with Autism*, Press Release 11<sup>th</sup> October 2000, Dublin: DES.
- Department of Education and Science (DES) (2000b) *Circular 25/00: Recognition of Teacher Qualifications for the Purposes of Teaching in National Schools*, Dublin: DES.
- Department of Education and Science (DES) (2001) *Educational Provision and Support for Persons with Autistic Spectrum Disorders: The Report of The Task Force on Autism*, Dublin: The Stationery Office.
- Department of Education and Science (DES) (2002a) *Circular 08/02: Applications for Full-time or Part-time Resource Teacher Support to Address the Special Education Needs of Children with Disabilities*, Dublin: DES.
- Department of Education and Science (DES) (2002b) *Applications for Full-time or Part-time Special Needs Assistant Support to Address the Special Care Needs of Children with Disabilities*, Dublin: DES.

- Department of Education and Science (DES) (2003) *Circular 24/03: Allocation of Resources for Pupils with Special Educational Needs in National Schools*, Dublin: DES.
- Department of Education and Science (DES) (2004) *Circular 09/04: Allocation of Resources for Pupils with Special Educational Needs in National Schools*, Dublin: DES.
- Department of Education and Science (DES) (2005a) *Circular 02/05: Special Education Circular Sp Ed 02/05: Organisation of Teaching Resources for Pupils who need Additional Support in Mainstream Primary Schools*, Dublin: DES.
- Department of Education and Science (DES) (2005b) *Circular 01/05: The National Council for Special Education*, Dublin: DES.
- Department of Education and Science (2005c) *Beginning to Teach: Newly Qualified Teachers in Irish Primary Schools*, Dublin: The Stationary Office.
- Department of Education and Science (2005d) *Evaluation of Classes for Pupils with Specific Speech and Language Disorders*, Dublin: The Stationery Office.
- Department of Education and Science (2005e) *Guidelines for Probationary Teachers in Primary Schools*, Dublin: The Stationery Office.
- Department of Education and Science (DES) (2005f) *Statement of Strategy 2005-2007*, Accessed online on Tuesday November 24<sup>th</sup> 2009 at [http://www.education.ie/servlet/blobServlet/des\\_statement\\_stratgey\\_text.htm](http://www.education.ie/servlet/blobServlet/des_statement_stratgey_text.htm)
- Department of Education and Science (DES) (2006a) *Evaluation of Educational Provision for Pupils with Autistic Spectrum Disorders*, Dublin: The Stationery Office.
- Department of Education and Science (DES) (2006b) *Continuing Professional Development for Personnel in Schools working with Pupils with Special Educational Needs*, Unpublished Document, Dublin: DES.
- Department of Education and Science (DES) (2006c) *Educational Provision for Children with Autistic Spectrum Disorders*, Unpublished Document, Dublin: DES.
- Department of Education and Science (DES) (2006d) *Circular 0140/2006: Probationary Requirements for Primary Teachers*, Dublin: DES.
- Department of Education and Science (2007a) *Inclusion of Students with Special Educational Needs: Post-Primary Guidelines*, Dublin: The Stationery Office.
- Department of Education and Science (2007b) *Circular 0089/2007: On-Line Certificate/Diploma in Education (Special/Inclusive Education) 2007/2008*, Dublin: DES.

- Department of Education and Science (2008a) *Circular 0052/2008: On-Line Certificate/Diploma in Education (Special/Inclusive Education) 2008/2009*, Dublin: DES.
- Department of Education and Science (DES) (2008b) *Statement of Strategy 2008-2010*, Internal Unpublished Document, Dublin: DES.
- Department of Education and Science (DES) (2009a) *Circular 0007/2009: Graduate Certificate in the Education of Pupils with Autistic Spectrum Disorders (ASDs) for Teachers Working With Pupils With ASDs in Special Schools, Special Classes or as Resource Teachers in Mainstream Primary and Post-Primary Schools-2009/2010*, Dublin: DES.
- Department of Education and Science (DES) (2009b) *Circular 0006/2009: Post-Graduate Certificate/Diploma Programme of Continuing Professional Development in Special Educational Needs (Autistic Spectrum Disorders) for Teachers*, Dublin: DES.
- Department of Education and Science (DES) (2009c) *Briefing for a Ph.D. Student on Educational Provision for Pupils with Autistic Spectrum Disorders*, Unpublished Document, Dublin: DES.
- Department of Education and Science (DES) (2009d) *Circular 0005/2009: Combined Post-Graduate Diploma Programme of Continuing Professional Development for Teachers Involved in Learning Support and Special Education-2009/2010*, Dublin: DES.
- Department of Education and Science (2009e) *Personal Communication*, Monday 14<sup>th</sup> September 2009.
- Department of Equality and Law Reform (1996) *A Strategy for Equality: Report of the Commission on the Status of People with Disabilities*, Dublin: Department of Equality and Law Reform.
- Department of Finance (2007) *Value for Money and Policy Review Initiative Guidance Manual*, Dublin: Department of Finance.
- Department of Health (1965) *Report of the Commission of Inquiry on Mental Handicap 1965*, Dublin: The Stationery Office.
- Deruelle, C., Rondan, C., Gepner, B. and Tardif, C. (2004) Spatial Frequency and Face Processing in Children with Autism and Asperger Syndrome, *Journal of Autism and Developmental Disorders*, Vol. 34 (2), pp. 199-210.
- Dewey, J. (1938) *Experience and Education*, New York: Collier.
- Dexter, L.A. (1970) *Elite and Specialised Interviewing*, Evanston: North Western University Press.

- Dickson, S.V., Chardm D.J. and Simmons, D.C. (1993) An Integrated Reading/Writing Curriculum: A Focus on Scaffolding, *LD Forum*, Vol. 18 (4), pp. 12-16.
- Dockrell, J. and McShane, J. (1992) *Children's Learning Difficulties. A Cognitive Approach*, Oxford: Blackwell.
- Dockrell, J. and Messer, D. (1999) *Children's Language and Communication Difficulties: Understanding, Identification and Intervention*, London: Cassell.
- Doherty, K., Fitzgerald, M. and Matthews, P. (2000) Services for Autism in Ireland, *The Irish Journal of Psychology*, Vol. 21 (1-2), pp. 50-69.
- Donaldson, J. (1980) Changing Attitudes towards Handicapped Persons: A Review and Analysis of Research, *Exceptional Children*, Vol. 4 (7), pp. 504-514.
- Donaldson, J. (1993) *A Squash and A Squeeze*, London: Macmillan.
- Donnellan, A.M. and Leary, M.R. (2006) *Movement Differences and Diversity in Autism/Mental Retardation. Appreciating and Accommodating People with Communication and Behaviour Challenges*, Pacific Beach: DRI Press.
- Dorricott, S. (2006) From Weary Resignation and Disaffection to Active Involvement in Education Plans: Reintroduction to a Mainstream Secondary School, *Good Autism Practice*, Vol. 7 (1), pp. 18-22.
- DPP v Best (1998), *Judgement Delivered by Mr. Justice Geoghegan on the 31<sup>st</sup> day of July, 1998*.
- Dunlap, G. and Fox, L. (1999) Supporting Families of Young Children with Autism, *Infants and Young Children*, Vol. 12 (2), pp. 48-54.
- Durcan, T.J. (1972) *History of Irish Education*, Wales: Dragon Books.
- Edelman Watkins, D. (2005) Maximizing Learning for Pupils with Special Needs, *Kappa Delta Pi Record*, Summer 2005, Vol. 41 (4), pp. 154-158.
- Egan, E. (2004) Continuing Professional Development of Teachers. In Burke, A. (ed.) *Teacher Education in the Republic of Ireland: Retrospect and Prospect, The Standing Conference on Teacher Education, North and South (SCoTENS)*, Armagh: The Center for Cross Border Studies, pp. 11-18.
- Eishenhardt, K. (1989) Building Theories from Case Study Research, *Academy of Management Review*, Vol. 14 (4), pp. 532-550.
- Eisner, E.W. (1995) What Artistically Crafted Research can Help us Understand about Schools, *Educational Theory*, Vol. 45 (1), pp. 1-6.

- Elliott, R.O., Dobbin, A.R., Rose, G.D. and Soper, H.V. (1994) Vigorous, Aerobic Exercise Versus General Motor Training Activities: Effects on Maladaptive and Stereotypic Behaviours of Adults with Both Autism and Mental Retardation, *Journal of Autism and Developmental Disorders*, Vol. 24 (5), pp. 565-576.
- Elliott, S. (2004) The Role and Training of Special Needs Assistants for Pupils with Autistic Spectrum Disorders in Ireland, *Good Autism Practice*, Vol. 5 (2), pp. 22-34.
- Ernsperger, L. (2002) *Keys to Success for Teaching Students with Autism*, Arlington: Future Horizons.
- Ernsperger, L. (2003) *A Continuum of Instructional Strategies for Students with Autism Spectrum Disorders*, Accessed online on Monday 28<sup>th</sup> July 2008 at <http://www.lcisd.org/Instruction/SpecialPrograms/2003AutismConference/images/Instructional%20Strategies/.pdf>
- Ernsperger, L. and Stegen-Hanson, T. (2004) *Just Take a Bite. Easy, Effective Answers to Food Aversions and Eating Challenges*, Arlington: Future Horizons Inc.
- European Community Council of Ministers of Education (1990) *Resolution of the Council and Ministers of Education Meeting Within the Council Concerning the Integration of Children and Young People with Disabilities into Ordinary Systems of Education: 1990 (90/c 162/01)*, Brussels: European Community.
- Evans, J. and Benefield, P. (2001) Systematic Reviews of Educational Research: Does the Medical Model Fit, *British Educational Research Journal*, Vol. 27 (5), pp. 527-541.
- Evans, P. and Ware, J. (1987) *Special Care Provision*, Windsor: NFER Nelson.
- Evans, R. (1996) *The Human Side of School Change*, San Francisco: Jossey-Bass.
- Fallon-Byrne, L. (1997) Curriculum Development: A Framework for the Future, *Reach*, Vol. 11 (1), pp. 3-11.
- Farrell, P. (2000) The Impact of Research on Developments in Inclusive Education, *International Journal of Inclusive Education*, Vol. 4 (2), pp. 153-162.
- Feinberg, E. and Vacca, J. (2000) The Drama and Trauma of Creating Policies on Autism: Critical Issues to Consider in the New Millennium, *Focus on Autism and Other Developmental Disabilities*, Vol. 15 (3), pp. 130-137.
- Feldt, L.S. and Brennan, R.L. (1993) Reliability. In Linn, R. (ed.) *Educational Measurement*, New York: MacMillan Publishing Co., pp. 105-146.

- Fennell, J. (2008) Break-time Inclusion: A Case Study of the Effects of Adult Organised Play on Children with Special Educational Needs, *REACH Journal of Special Needs Education in Ireland*, Vol. 21 (2), pp. 77-87.
- Fife-Schaw, C. (2000) Surveys and Sampling Issues. In Breakwell, G.M., Hammond, S. and Fife-Schaw, C. (eds.) *Research Methods in Psychology* (2<sup>nd</sup> ed), London: Sage Publications, pp. 88-104.
- Firestone, W.A. (1987) Meaning in Method: The Rhetoric of Quantitative and Qualitative Research, *Educational Researcher*, Vol. 16 (7), pp. 16-21.
- Firestone, W.A. and Pennell, J.R. (1993) Teacher Commitment, Working Conditions and Differential Incentive Policies, *Review of Educational Research*, Vol. 63, pp. 489-525.
- Flanagan, J.C. (1949) Critical Requirements: A New Approach to Employee Evaluation, *Personnel Psychology*, Vol. 2, pp. 419-425.
- Florian, L. (2008) Special or Inclusive Education: Future Trends, *British Journal of Special Education*, Vol. 35 (4), pp. 202-208.
- Fontana, A. and Frey, J.H. (1998) Interviewing; The Art of Science. In Denzin, N.K. and Lincoln, Y.S. (eds.) *Collecting and Interpreting Qualitative Materials*. Thousand Oaks: Sage, pp. 47-78.
- Fox, G. (1993) *A Handbook for Special Needs Assistants*, London: David Fulton Publishers.
- Frankl, C. (2005) Managing Individual Education Plans: Reducing the Load of the Special Educational Needs Co-Ordinator, *Support for Learning*, Vol. 20 (2), pp. 77-82.
- Freeman, R. (2007) Epistemological Bricolage: How Practitioners Make Sense of Learning, *Administration and Society*, Vol. 39 (4), pp. 476-496.
- Friel, J. (1997) *Children with Special Needs. Assessment, Law and Practice. Caught in the Acts* (4<sup>th</sup> ed), London: Jessica Kingsley Publishers.
- Friel, J. (2005, June 19<sup>th</sup>) They Told Us Lewis Had to Wear a Baby Harness on the School Bus. All the Kids Could See, It Was So Undignified, *Ireland on Sunday*, pp. 34-35.
- Frith, U. (1991) Autistic Psychopathy in Childhood - Hans Asperger. Translated and Annotated by Uta Frith. In Frith, U. (ed.) *Autism and Asperger Syndrome*, Cambridge: Cambridge University Press, pp. 37-92.
- Frith, U. (1997) Autism, *Scientific American Presents*, Vol. 7 (1), pp. 92-98.
- Fuchs, D. and Fuchs, L.S. (1995) What's "Special" About Special Education?, *Phi Delta Kappa*, Vol. 76 (7), pp. 522- 531.

- Fulcher, G. (1989) *Disabling Policies: A Comparative Approach to Education Policy and Disability*, London: Falmer Press.
- Fullan, M. (1993) *Change Forces: Probing the Depth of Educational Reform*, London: Falmer Press.
- Fullan, M. (1995) The Limits and the Potential of Professional Development. In Guskey, T.R. and Huberman, M. (eds) *Professional Development in Education: New Paradigms and Practices*, Columbia University: Teachers' College Press, pp. 253-268.
- Gannon, M. and Kenny, M. (2006) *Draft Report: A Whole School Approach to Interculturalism and Equality: A Report on an Action Research Project of the City of Dublin Vocational Education Committee*, Unpublished Report, Dublin: Department of Education and Science.
- Garcia, E. (2007, 1<sup>st</sup> September) *The Castello School, Eight International Congress of Autism Europe*, Norway Convention Centre, Lillestrom, Oslo.
- Gardner, N. (2007) *A Friend Like Henry*, London: Hodder and Stoughton Ltd.
- Garfinkel, G. (1996) *Studies in Ethnomethodology*, Oxford: Polity Press.
- Gash, H., O'Reilly, M. and Noonan Walsh, P. (1996) Educational Services for Students with Intellectual Disabilities in Rural and Urban Areas of the Republic of Ireland, *Rural Special Education Quarterly*, Vol. 15 (3), pp. 20-24.
- Gates, G. (2006) Moving to the Heart of the Matter. In Ariel, C.N. and Naseef, R.A. (eds.) *Voices from the Spectrum*, London: Jessica Kingsley Publishers, pp. 237-240.
- Gerland, G. (1996) *A Real Person. Life on the Outside*, London: Souvenir Press.
- Gernsbacher, M.A. (2003) Is One Style of Early Behavioral Treatment for Autism "Scientifically Proven", *Journal of Developmental and Learning Disorders*, Vol. 7, pp. 19-25.
- Giangreco, M.F. and Broer, S.M. (2003) *Alternatives to Overreliance or Inappropriate Utilisation of Paraprofessionals in Special Education*, Accessed online on Sunday 1<sup>st</sup> July 2008 at <http://www.uvm.edu/~cdci/evolve/alternativeinfo.html>
- Giangreco, M.F. and Taylor, S. (2003) "Scientifically Based Research" and Qualitative Inquiry, *Research and Practice for Persons with Severe Disabilities*, Vol. 28 (3), pp. 133-137.
- Giangreco, M.F., Yuan, S., McKenzie, B., Cameron, P. and Fialka, J. (2005) Be Careful What You Wish for...Five Reasons to be Concerned about the Assignment of Individual Paraprofessionals, *Teaching Exceptional Children*, Vol. 37 (95), pp. 28-34.



- Gilotty, L., Kenworthy, L., Sirian, L., Black, D.O. and Wagner, A.E. (2002) Adaptive Skills and Executive Function in Autism Spectrum Disorders, *Child Neuropsychology*, Vol. 8 (4), pp. 241-248.
- Glaser, B., and Strauss, A. (1968) *The Discovery of Grounded Theory*, London: Weidenfield and Nicolson.
- Glesne, C. and Peshkin, A. (1992) *Becoming a Qualitative Researcher: An Introduction*, New York: Longman.
- Glendenning, D. (1999) *Education and the Law*, Dublin: Butterworths.
- Goldberg, M.J. (2001) Balanced Optimism, *Phi Delta Kappa*, Vol. 82 (9), pp. 687-690.
- Golding, M. and Powell, S. (2001) Augmentative Communication. In The National Autistic Society (ed.) *Approaches to Autism*, London: The National Autistic Society, p.13.
- Gomm, R. and Woods, P. (1993) Introduction. In Gomm, R. and Woods, P. (eds) *Educational Research in Action*, London: Paul Chapman Publishers, pp. x – xvi.
- Gorden, R.L. (1992) *Basic Interviewing Skills*, Prospect Heights: Waveland Press.
- Grandin, T. (1995) *Thinking in Pictures and Other Reports from My Life with Autism*, New York: Vintage Books.
- Grandin, T. (2002) *Teaching Tips for Children and Adults with Autism*, Accessed online on Friday 24<sup>th</sup> August 2007 at <http://www.autism.org/template/tips.html>.
- Gray, C. (1994a) *The New Social Story Book*, Arlington: Future Horizons.
- Gray, C. (1994b) *Comic Strip Conversations*, Arlington: Future Horizons.
- Gray, C. (1998) The Advanced Social Story Workbook, *Jenison Public Schools Morning News*, Vol. 10 (2), pp. 1-22.
- Gray, C. (2005) Foreword. In Howley, M. and Arnold, E. *Revealing the Hidden Social Code*, London: Jessica Kingsley Publishers, pp. 9-12.
- Gray, C. and Garand, J. (1993) Social Stories: Improving Responses of Students with Autism with Accurate Social Information, *Focus on Autistic Behaviour*, Vol. 8 (1), pp. 1-10.
- Gray, C. and Leigh White, A. (2002) *My Social Stories Book*, London: Jessica Kingsley Publishers.
- Great Britain, Department of Education and Science (1978) *Special Educational Needs. Report of the Committee of Enquiry into the Education of Handicapped Children and Young People* (Warnock Report), London: HMSO.

- Great Britain (1981) *Education Act, 1981*, London: HMSO.
- Green, V.A., Pituch, K.A., Choi, A., O'Reilly, M. and Sigafoos, J. (2006) Internet Survey of Treatments Used by Parents of Children with Autism, *Research in Developmental Disabilities*, Vol. 27 (1), pp. 70-84.
- Greene, C. (2006) I Should Have Listened to My Mother. A Mother's Account of Her Journey Towards Understanding her Young Child with Autism, *Good Autism Practice*, Vol. 7 (1), pp. 13-17.
- Greenspan, S. and Wieder, S. (2006) *Engaging Autism*, Cambridge: Da Capo Press.
- Greenway, C. (2000) Autism and Asperger Syndrome: Strategies to Promote Prosocial Behaviours, *Educational Psychology in Practice*, Vol. 16 (3), pp. 469-486.
- Gresham, F.M. and MacMillan, D.L. (1997) Autistic Recovery. An Analysis and Critique of the Empirical Evidence on the Early Intervention Project, *Behavioral Disorders*, Vol. 22 (4), pp. 185-201.
- Griffin, S. and Shevlin, M. (2007) *Responding to Special Educational Needs. An Irish Perspective*, Dublin: Gill and Macmillan Ltd.
- Griffith, E.M., Pennington, B.F., Wehner, E.A. and Rogers, S.J. (1999) Executive Functions in Young Children with Autism, *Child Development*, Vol. 70 (4), pp. 817-832.
- Grinker, R.R. (2007) *Unstrange Minds: Remapping the World of Autism*, New York: Basic Books.
- Gross, T.F. (2005) Global-Local Precedence in the Perception of Facial Age and Emotional Expression by Children with Autism and Other Developmental Disabilities, *Journal of Autism and Developmental Disorders*, Vol. 35 (6), pp. 773-785.
- Grundy, S. and Robison, J. (2004) Teacher Professional Development: Themes and Trends in the Recent Australian Experience. In Day, C. and Sachs, J. (eds) *International Handbook on the Continuing Professional Development of Teachers*, Maidenhead: Open University Press, pp. 146-166.
- Guba, E.G. and Lincoln, Y.S. (1981) *Effective Evaluation*, San Francisco: Jossey-Bass.
- Guldberg, K. and Pilkington R. (2006) A Community of Practice Approach to the Development of Non-traditional Learners Through Networked Learning, *Journal of Computer Assisted Learning*, Vol. 22 (3), pp. 159-171.
- Guldberg, K. and Pilkington, R. (2007) Tutor Roles in Facilitating Reflection on Practice Through Online Discussion, *Educational Technology and Society*, Vol. 10 (1), pp. 61-72.

- Guralnick, M.J. (1978) The Application of Single-Subject Research Designs to the Field of Learning Disabilities, *Journal of Learning Disabilities*, Vol. 11 (7), pp. 415 - 421.
- Gus, L. (2000) Autism: Promoting Peer Understanding, *Educational Psychology in Practice*, Vol. 16 (3), pp. 461-467.
- Guskey, T.R. (1995) Professional Development in Education: In Search of the Optimal Mix. In Guskey, T.R. and Huberman, M. (eds) *Professional Development in Education: New Paradigms and Practices*, Columbia University: Teachers' College Press, pp. 114-131.
- Guskey, T.R. (2000) *Evaluating Professional Development*, Thousand Oaks: Corwin Press.
- Guskey, T.R. (2002) Professional Development and Teacher Change, *Professional Development and Teacher Change*, Vol. 8 (3-4), pp. 381-391.
- Guskey, T.R. and Huberman, M. (1995) Introduction. In Guskey, T.R. and Huberman, M. (eds) *Professional Development in Education: New Paradigms and Practices*, Columbia University: Teachers' College Press, pp. 1-6.
- Guskey, T.R. and Yoon, S.K. (2009) What Works in Professional Development, *Phi Delta Kappan*, Vol. 90 (7), pp. 495-500.
- Hagedorn, V.S. (2004) Including Special Learners: Providing Meaningful Participation in the Music Class, *General Music Today*, Vol. 17 (3), pp. 44-50.
- Hall, K. (2001) *Asperger Syndrome, the Universe and Everything*, London: Jessica Kingsley Publishers.
- Hammersley, M. (1990) *Reading Ethnographic Research* (2<sup>nd</sup>ed), London: Longman.
- Hammersley, M. (1999) Introduction. In Hammersley, M. (ed.) *Researching School Experience: Ethnographic Studies of Teaching and Learning*, London: Falmer Press, pp. 1 – 13.
- Hammond, H., Casteneda, R. and Ortega, R. (2006) Taking a Child's IEP Goals Home, *Exceptional Parent*, Vol. 36 (9), p. 28, pp. 28-32.
- Hanafin, M. (2007) *Speech by Minister Mary Hanafin at the Launch of the Certificate/Diploma in Education (Special/Inclusive Education, 13<sup>th</sup> March 2007, Croke Park, Dublin.*
- Hanafin, M. (2008) *Speech by Minister Mary Hanafin during the Private Members' Debate on Services for Children with Special Educational Needs, 12<sup>th</sup> February 2008, Dublin: Dáil Debates Official Reports.*

- Happé, F.G.E. (1994a) An Advanced Test of Theory of Mind: Understanding of Story Characters' Thoughts and Feelings by Able Autistic, Mentally Handicapped and Normal Children and Adults, *Journal of Autism and Developmental Disorders*, Vol. 24 (2), pp. 129-154.
- Happé, F. (1994b) *Autism: An Introduction to Psychological Theory*, Hove: Psychology Press Ltd.
- Happé, F. (1999) Autism: Cognitive Deficit or Cognitive Style, *Trends in Cognitive Science*, Vol. 3 (2), pp. 216-222.
- Happé, F. and Frith, U. (2006) The Weak Coherence Account: Detail Focused Cognitive Style in Autism Spectrum Disorders, *Journal of Autism and Developmental Disorders*, Vol. 36 (1), pp. 5-25.
- Happé, F., Ronald, A. and Plomin, R. (2006) Time to Give up on a Single Explanation for Autism, *Nature Neuroscience*, Vol. 9 (10), pp. 1218-1220.
- Hargreaves, A. (1994) *Changing Teachers, Changing Times*, London: Cassell.
- Hargreaves, A. (1998) The Emotional Practice of Teaching, *Teaching and Teacher Education*, Vol. 14 (8), pp. 835-54.
- Hargreaves, D. (1994) The New Professionalism: The Synthesis of Professional and Institutional Development, *Teaching and Teacher Education*, Vol. 10 (4), pp. 423-438.
- Hargreaves, A. and Fullan, M. (1998) *What's Worth Fighting for Out There?*, Ontario: Teachers' College Press.
- Harper, D. (2000) Reimagining Visual Methods: Galileo to Neuroromancer. In Denzin, N.K. and Lincoln, Y.S. (eds) *Handbook of Qualitative Research* (2<sup>nd</sup> ed), Thousand Oaks: Sage, pp. 717 – 732.
- Harper, D. (2005) What's New Visually?. In Denzin, N.K. and Lincoln, Y.S. (eds) *The Sage Handbook of Qualitative Research* (3<sup>rd</sup> ed), Thousand Oaks, Sage Publications, pp. 747-762.
- Harper, C.B., Symon, J.B.G., and Frea, W.D. (2008) Recess is Time-in: Using Peers to Improve Social Skills of Children with Autism, *Journal of Autism and Developmental Disorders*, Vol. 38 (5), pp. 815-826.
- Hastings, R.P., Hewes, A., Lock, S. and Witting, A. (1996) Do Special Educational Needs Courses Have Any Impact on Student Teachers' Perceptions of Children with Severe Learning Difficulties?, *British Journal of Special Education*, Vol. 23 (3), pp. 139-144.
- Hayes, D. (2000) Cascade Training and Teachers' Professional Development, *ELT Journal*, Vol. 54 (2), pp. 135-145.

- Heaton, P. and Allen, R. (2009) *New Perspectives on the Diversity of Musical Experience in Autism and Other Neurodevelopmental Conditions*, AWARES Conference Centre, Accessed online on Thursday 26<sup>th</sup> November 2009 at [http://www.awares.org/conferences/show\\_paper.asp?section=000100010001&conferenceCode=000200110006&id=244&full\\_paper=1](http://www.awares.org/conferences/show_paper.asp?section=000100010001&conferenceCode=000200110006&id=244&full_paper=1)
- Heaton, P., Hermelin, B. and Pring, L. (1999) Can Children with Autistic Spectrum Disorders Perceive Affect in Music? An Experimental Investigation, *Psychological Medicine*, Vol. 29 (6), pp. 1405-1410.
- Heffernan, B. (2007, February 24<sup>th</sup>) Mobiles Put Kids at Risk of Autism and Brain Tumours, *The Irish Independent*, p. 16.
- Heflin, J.L. and Alberto, P.A. (2001) ABA and Instruction of Students with Autism Spectrum Disorders: Introduction to the Special Series, *Focus on Autism and Other Developmental Disabilities*, Vol. 16 (2), pp. 66-67.
- Heflin, J.L. and Fiorino Alaimo, D. (2007) *Students with Autistic Spectrum Disorders: Effective Instructional Practices*, New Jersey: Pearson Merrill Prentice Hall.
- Heflin, J.L. and Simpson, R.L. (1998a) Interventions for Children and Youth With Autism: Prudent Choices in a World of Exaggerated Claims and Empty Promises. Part 11: Legal/Policy Analysis and Recommendations for Selecting Interventions and Treatments, *Focus on Autism and Other Developmental Disorders*, Vol. 13 (4), pp. 212-220.
- Heflin, J.L. and Simpson, R.L. (1998b) Interventions for Children and Youth with Autism, *Focus on Autism and other Developmental Disabilities*, Vol. 13 (4), pp. 194-211.
- Hegarty, S. (1993) Reviewing the Literature on Integration, *European Journal of Special Needs Education*, Vol. 8 (3), pp. 194-200.
- Hegarty, S. (2001) Inclusive Education – A Case to Answer, *Journal of Moral Education*, Vol. 30 (3), pp. 243-249.
- Hegarty, S., Pocklington, K. and Lucas, D. (1981) *Educating Children with Special Needs in the Ordinary School*, Windsor: NFER-Nelson.
- Heward, W.L. (2003) Ten Faulty Notions About Teaching and Learning that Hinder the Effectiveness of Special Education, *The Journal of Special Education*, Vol. 36 (4), pp. 186-205.
- Heward, W.L., Gardner, R.III, Cavanaugh, R.A., Courson, F.H., Grossi, T.A. and Barbetta, P.M. (1996) Everyone Participates in This Class, *Teaching Exceptional Children*, Vol. 28 (2), pp. 4-10.
- Hill, J.E. and Kerber, A. (1967) *Models, Methods and Analytical Procedures in Education Research*, Detroit: Wayne University Press.

- Hobson, R.P. (1986a) The Autistic Child's Appraisal of Expressions of Emotion, *Journal of Child Psychology and Psychiatry*, Vol. 27 (3), pp. 321-342.
- Hobson, R.P. (1986b) The Autistic Child's Appraisal of Expressions of Emotion: A Further Study, *Journal of Child Psychology and Psychiatry*, Vol. 27 (5), pp. 671-680.
- Hobson, R.P. (1993) The Emotional Origins of Social Understanding, *Philosophical Psychology*, Vol. 6 (3), pp.227-248.
- Hobson, R.P. (2002) *The Cradle of Thought*, Oxford: Oxford University Press.
- Hodkinson, A. (2006) Conceptions and Misconceptions of Inclusive Education – One Year On: A Critical Analysis of Newly Qualified Teachers' Knowledge and Understanding of Inclusion, *Research in Education*, Vol. 76 (1), pp. 43-55.
- Hodgdon, L. (1995) *Visual Strategies for Improving Communication: Practical Supports for School and Home*, Troy: Quirk Roberts Publishing.
- Hodgdon, L. (1999) *Solving Behaviour Problems in Autism*, Troy: Quirk Roberts Publishing.
- Hogan, P. and Smith, G. (2007) A New Model of CPD – The TL21 Project (Republic of Ireland). In *Teacher Education and Schools: Together Towards Improvement*, *The Standing Conference on Teacher Education, North and South (SCoTENS)*, Armagh: The Centre for Cross Border Studies, pp. 79-81.
- Hogg, J. and Sebba, J. (1986) *Profound Retardation and Multiple Impairment. Volume 2. Education and Therapy*, London: Croom Helm.
- Hogg, J, Cavet, J., Lambe, L. and Smeddle, M. (2001) The Use of 'Snoezelen' as Multisensory Stimulation for People with Intellectual Disabilities: A Review of Research, *Research in Developmental Disabilities*, Vol. 22 (5), pp. 353-372.
- Holistic Approach to NeuroDevelopment and Learning Efficiency (HANDLE) Institute (2009a) *Autism Spectrum Disorders*, Accessed online on Friday 31<sup>st</sup> July 2009 at [http://www.handle.org/abouthdl/handouts/Autism\\_Spectrum\\_Disorders\\_sheet\\_9-16-04.pdf](http://www.handle.org/abouthdl/handouts/Autism_Spectrum_Disorders_sheet_9-16-04.pdf)
- Holistic Approach to NeuroDevelopment and Learning Efficiency (HANDLE) Institute (2009b) *A Brief Look at HANDLE*, Accessed online on Friday 31<sup>st</sup> July 2009 at <http://www.handle.org/index2.html>
- Hornby, G. (1999) Inclusion or Delusion: Can One Size Fit All?, *Support for Learning*, Vol. 14 (4), pp. 152-157.
- House, E.R. (2005) Qualitative Evaluation and Changing Social Policy. In Denzin, N.K. and Lincoln, Y.S. (eds) *The Sage Handbook of Qualitative Research* (3<sup>rd</sup> ed), Thousand Oaks: Sage Publications, pp. 1069-1081.

- Howie, D. (1999) Models and Morals: Meanings Underpinning the Scientific Study of Special Educational Needs, *Journal of Disability Development and Education*, Vol. 46 (1), pp. 9-24.
- Howley, M. and Arnold, E. (2005) *Revealing the Hidden Social Code*, London: Jessica Kingsley Publishers.
- Howlin, P. (1998) Practitioner Review: Psychological and Educational Treatments for Autism, *Journal of Child Psychology and Psychiatry*, Vol. 39 (3), pp. 307-322.
- Howlin, P. (2001) Behavioural Techniques. In The National Autistic Society (ed.) *Approaches to Autism*, London: The National Autistic Society, p. 17.
- Howlin, P. (2002, 15<sup>th</sup> February) *Intervention Strategies: The Supermarket of Approaches – Which Brands Stands the Test. The Spectrum Diagnostic Assessment and Therapy Centre, The School of Psychology, Queen's University, Belfast*, Conference, The Regency Hotel, Dublin.
- Howlin, P. (2008) Autism and Diagnostic Substitution, *Developmental Medicine and Child Neurology*, Vol. 50 (5), p. 325.
- Howlin, P., Gordon, R.K., Pasco, G., Wade, A. and Charman, T. (2007) The Effectiveness of Picture Exchange Communication System (PECS) Training for Teachers of Children with Autism: a Pragmatic, Group Randomised Controlled Trial, *Journal of Child Psychology and Psychiatry*, Vol. 48 (5), pp. 473-481.
- Huberman, M. (1989) The Professional Life Cycle of Teachers, *Teachers College Record*, Vol. 91 (1), pp. 31-57.
- Huberman, M. (1995) Professional Careers and Professional Development. In Guskey, T. and Huberman, M. (eds) *Professional Development in Education: New Paradigms and Practices*, New York: Teachers College Press, pp. 193-224.
- Huberman, M.A. and Miles, M.B. (1998) Data Management and Analysis Methods. In Denzin, N.K. and Lincoln, Y.S. (eds) *Collecting and Interpreting Qualitative Materials*, Thousand Oaks: Sage Publications, pp. 179 – 210.
- Hubert, B., Wicker, B., Moore, D.G., Monfardini, E., Duverger, H., Da Fonséca, D. and Deruelle, C. (2007) Brief Report: Recognition of Emotional and Non-Emotional Biological Motion in Individuals with Autistic Spectrum Disorders, *Journal of Autism and Developmental Disorders*, Vol. 37 (7), pp. 1386-1392.
- Hughes, M. (2000) Towards a New Era: A Review of Policy Documents relating to General Learning Disabilities, 1960-1990, *REACH Journal of Special Needs Education in Ireland*, Vol. 13 (2), pp. 66-76.
- Hughes, C. (2002) Executive Functions and Development: Emerging Themes, *Infant and Child Development*, Vol. 11 (2), pp. 201-209.

- Hume, K. and Odom, S. (2007) Effects of an Individual Work System on the Independent Functioning of Students with Autism, *Journal of Autism and Developmental Disorders*, Vol. 37 (6), pp.1166-1180.
- Humphrey, N. (2008) Including Pupils with Autistic Spectrum Disorders in Mainstream Schools, *Support for Learning*, Vol. 23 (1), pp. 41-47.
- Hutchins, T.L. and Prelock, P.A. (2006) Using Social Stories and Comic Strip Conversations to Promote Socially Valid Outcomes for Children with Autism, *Seminars in Speech and Language*, Vol. 27 (1), pp. 47-58.
- Hutchinson, B. and Bryson, P. (1997) Video, Reflection and Transformation: Action Research and Vocational Education and Training in a European Context, *Educational Action Research*, Vol. 5 (2), pp. 283-303.
- Hutton, A.M. and Caron, S.L. (2005) Experiences of Families with Children with Autism in Rural New England, *Focus on Autism and Other Developmental Disabilities*, Vol. 20 (3), pp. 180-189.
- Interactive Autism Network (IAN) (2007) *The IAN Data*, Accessed online on Monday 16<sup>th</sup> July 2007 at [http://www.iancommunity.org/cs/ian\\_research\\_reports/ian\\_research\\_report\\_may\\_2007](http://www.iancommunity.org/cs/ian_research_reports/ian_research_report_may_2007)
- Iovannone, I., Dunlap, G., Huber, H. and Kincaid, D. (2003) Effective Educational Practices for Students with Autism Spectrum Disorders, *Focus on Autism and Other Developmental Disabilities*, Vol. 18 (3), pp. 150-165.
- Ireland (1937) *Bunreacht na hÉireann (Constitution of Ireland)*, Dublin: The Stationery Office.
- Ireland (1981) *The Education of Physically Handicapped Children*, Dublin: The Stationery Office.
- Ireland (1983) *The Education and Training of Severely and Profoundly Mentally Handicapped Children in Ireland*, Dublin: The Stationery Office.
- Ireland (1992) *Education for a Changing World: Green Paper on Education*, Dublin: The Stationery Office.
- Ireland (1993) *Report of the Special Education Review Committee (SERC Report)*, Dublin: The Stationery Office.
- Ireland (1995) *Charting Our Education Future: White Paper on Education*, Dublin: The Stationery Office.
- Ireland (1997a) *Education Bill 1997*, Dublin: The Stationery Office.
- Ireland (1997b) *Education Bill 1997*, Dublin: The Stationery Office.
- Ireland (1998) *Education Act, 1998*, Dublin: The Stationery Office.



- Ireland (1999) *Report of the Working Party on the Role of the Primary School Principal*, Dublin: The Stationery Office.
- Ireland (2000) *Education (Welfare) Act, 2000*, Dublin: The Stationery Office.
- Ireland (2001) *Teaching Council Act, 2001*, Dublin: The Stationery Office.
- Ireland (2000-2004) *The Equal Status Acts 2000 to 2004*, Dublin: The Stationery Office.
- Ireland (2003) *European Convention on Human Rights Act 2003*, Dublin: The Stationery Office.
- Ireland (2004) *Education for Persons with Special Educational Needs Act 2004*, Dublin: The Stationery Office.
- Irish National Teachers Organisation (2009) *Understanding ASD, Autism and Asperger Syndrome*, Accessed online Monday 30<sup>th</sup> November 2009 at [http://www.into.ie/ROI/ProfessionalDevelopmentTradeUnionTraining/PDUDownloads/20090907\\_AutumnProgramme\\_Detail\\_Site\\_AG.pdf](http://www.into.ie/ROI/ProfessionalDevelopmentTradeUnionTraining/PDUDownloads/20090907_AutumnProgramme_Detail_Site_AG.pdf)
- Jackson, L. (2002) *Freaks, Geeks and Asperger Syndrome. A User Guide to Adolescence*, London: Jessica Kingsley Publishers.
- Janney, R.E., Snell, M.E., Beers, M.K. and Raynes, M. (1995) Integrating Students with Moderate and Severe Disabilities into General Education Classes, *Exceptional Children*, Vol. 61 (5), pp. 425-429.
- Janssen, M.J., Riksen-Walraven, M. and Van Dijk, J.P.M. (2003) Contact Effects of An Intervention Program to Foster Harmonious Interactions between Deaf-Blind Children and their Educators, *Journal of Visual Impairment and Blindness*, April 2003, pp. 215-229.
- Jennett, H.K., Harris, S.L. and Mesibov, G.B. (2003) Commitment to Philosophy, Teacher Efficacy, and Burnout Among Teachers of Children with Autism, *Journal of Autism and Developmental Disorders*, Vol. 33 (6), pp. 583-593.
- Jerwood, L. (1999) Using Special Needs Assistants Effectively, *British Journal of Special Education*, Vol. 26 (3), pp. 127-129.
- Joint Committee on Education and Science (2006) *Special Educational Needs: Presentation*, Accessed online Tuesday 29<sup>th</sup> July 2008 at <http://debates.oireachtas.ie/DDebate.aspx?F=EDJ20060921.xml&Node H2=#H2>
- Jolliffe, T. and Baron-Cohen, S. (1999) The Strange Stories Test: A Replication with High-Functioning Adults with Autism or Asperger Syndrome, *Journal of Autism and Developmental Disorders*, Vol. 29 (5), pp. 395-406.

- Jones, G. (2002a, 19<sup>th</sup> January) *Meeting the Needs of Able Children with ASD in the Mainstream School, Distance Education Course for Professionals working with Children with Autism, School of Education, The University of Birmingham, Lecture*, Dublin: St. Patrick's College, Drumcondra, Dublin.
- Jones, G. (2002b) *Educational Provision for Children with Autism and Asperger Syndrome: Meeting their Needs*, London: Jessica Kinsley Publishers.
- Jones, G., English, A., Guldberg, K., Jordan, R., Richardson, P. and Waltz, M. (2008) *Educational Provision for Children and Young People with Autism Spectrum Disorders living in England: A Review of Current Practice, Issues and Challenges*, London: Autism Education Trust.
- Jordan, A., Schwartz, E. and McGhie-Richmond, D. (2009) Preparing Teachers for Inclusive Classrooms, *Teacher and Teacher Education*, Vol. 25 (4), pp. 535-542.
- Jordan, R. (1985) Signing and Autistic Children, *Communication*, Vol. 19 (3), pp. 19-21.
- Jordan, R. (1999a) *Autistic Spectrum Disorders: An Introductory Handbook for Practitioners*, London: David Fulton Publishers.
- Jordan, R. (1999b) Evaluating Practice: Problems and Possibilities, *Autism*, Vol. 3 (4), pp. 411-434.
- Jordan, R. (2001) *Autism with Severe Learning Difficulties*, London: Souvenir Press.
- Jordan, R. (2005) Autistic Spectrum Disorders. In Lewis, A. and Norwich, B. (eds) *Special Teaching for Special Children: Pedagogies for Inclusion*, Maidenhead: Open University Press, pp. 110-122.
- Jordan, R. (2007a, 1<sup>st</sup> September) *Social Inclusion and the Education of Children with Autism Spectrum Disorders, Eight International Congress of Autism Europe*, Conference, Norway Convention Centre, Lillestrom, Oslo.
- Jordan, R. (2007b, 30<sup>th</sup> January) *Developing the Curriculum and Approaches to Meet the Needs of Pupils with Autistic Spectrum Disorders, Across the Spectrum: Enabling Teachers, Enabling Pupils, The Special Education Support Service*, Conference, Croke Park, Dublin.
- Jordan, R. (2008) Autistic Spectrum Disorders: A Challenge and a Model for Inclusion in Education, *British Journal of Special Education*, Vol. 35 (1), pp. 11-15.
- Jordan, R. and Jones, G. (1996) *Educational Provision for Children with Autism in Scotland: Report to The Scottish Office Education and Industry Department*, Birmingham: The University of Birmingham.
- Jordan, R. and Jones, G. (1999) Review of Research into Educational Interventions for Children with Autism in the UK, *Autism*, Vol. 3 (1), pp 101-110.

- Jordan, R., Jones, G. and Murray, D. (1998) *Educational Interventions for Children with Autism: A Review of Recent and Current Research*, Sudbury: Department for Education and Employment.
- Jordan, R. and Powell, S. (1995) *Understanding and Teaching Children with Autism*, Chichester: Wiley.
- Jung, L.A., Gomez, C., Baird, S.M. and Galyon Keramidas, C.L. (2008) Designing Intervention Plans. Bridging the Gap Between Individualised Education Programmes and Implementation, *Teaching Exceptional Children*, Vol. 41 (1), pp. 26-33.
- Kalb, C. (2008) Mysteries and Complications: Autism is Everywhere Once Again. Separating Fact from Fear as the Courts and Hollywood Wade in, *Newsweek*, March 24, 2008, pp. 56-57.
- Kalyva, E. and Avramidis, E. (2005) Improving Communication Between Children with Autism and Their Peers Through the "Circle of Friends": A Small-Scale Intervention Study, *Journal of Applied Research in Intellectual Disabilities*, Vol. 18 (3), pp. 253-261.
- Kanner, L. (1943) Autistic Disturbances of Affective Contact, *Nervous Child*, Vol. 2, pp. 217-250.
- Kanner, L. (1971) Follow-up Study of Eleven Autistic Children Originally Reported in 1943, *Journal of Autism and Childhood Schizophrenia*, Vol. 1 (2), pp. 119-145.
- Kasari, C. (2002) Assessing Change in Early Intervention Programs for Children with Autism, *Journal of Autism and Developmental Disorders*, Vol. 32 (5), pp. 447-461.
- Kaufman, B. (1976) *To Love is to be Happy with*, London: Souvenir Press.
- Kaufman, B. N. (1994) *Son-Rise, The Miracle Continues*, Tiburon; H. J. Kramer Inc.
- Kearney, C.A. and Durand, V.M. (1992) How Prepared are Our Teachers for Mainstreamed Classroom Settings. A Survey of Postsecondary Schools of Education in New York State, *Exceptional Children*, Vol. 59 (1), pp. 6-11.
- Kearns, J.F., Kleinert, H.L., Clayton, J., Burdge, M. and Williams, R. (1998) Principal Supports for Inclusive Assessment: A Kentucky Story, *Teaching Exceptional Children*, Vol. 31 (2), pp. 16-23.
- Kellett, M. and Nind, M. (2003) *Implementing Intensive Interaction in Schools*, London: David Fulton Publishers.

- Kennedy, M. (1998) *Form and Substance of Inservice Teacher Education (Research Monograph No. 13)*, Madison, National Institute for Science Education, University of Wisconsin-Madison, Accessed online on Thursday 30<sup>th</sup> July 2009 at [http://www.wcer.wisc.edu/archive/NISE/Publications/Research Monographs/vol13.pdf](http://www.wcer.wisc.edu/archive/NISE/Publications/Research%20Monographs/vol13.pdf)
- Kern, P., Wolery, M. and Aldridge, D. (2007) Use of Songs to Promote Independence in Morning Greeting Routines for Young Children with Autism, *Journal of Autism and Developmental Disorders*, Vol. 37 (7), pp. 1264-1271.
- Kidder, L.H., Judd, C.M. and Smith E.R. (1986) *Research Methods in Social Relations* (5<sup>th</sup> ed), New York: Holt, Rinehart and Winston.
- Kiernan, C., Reid, B. and Jones, L. (1982) *Signs and Symbols: Use of Non-Vocal Communication Systems*, London: Heinemann Educational Books.
- Kilkelly, U. (2000) The Protection of Children's Rights in Ireland: Monitoring the Monitoring Process of the UN Convention on the Rights of the Child. In O'Driscoll, D. (ed.) *Irish Human Rights Review, 2000*, Dublin: Roundhall, Sweet and Maxwell, pp. 17-40.
- Killeavy, M. and Murphy, R. (2007) Partnership in Teacher Induction: The Teacher Induction Pilot Project, Republic of Ireland. In *Teacher Education and Schools: Together Towards Improvement, The Standing Conference on Teacher Education, North and South (SCoTENS)*, Armagh: The Centre for Cross Border Studies, pp. 63-67.
- Killion, J. (2008) *Assessing Impact: Evaluating Staff Development* (2<sup>nd</sup> ed), Thousand Oaks: Corwin Press.
- Kitchin, R. and Mulcahy, F. (1999) *Disability: Access to Education and Future Opportunities*, Dublin: Royal Irish Academy and Combat Poverty Agency.
- Knight, I. (2009, January 18<sup>th</sup>) Save Us From Perfection, *The Sunday Times, News Review*, p. 9.
- Knott, L. (1998) Ben's Story: Developing the Communication Abilities of a Pupil with Autism. In Hewett, D. and Nind, M. (eds) *Interaction in Action: Reflections on the Use of Intensive Interaction in Schools*, London: David Fulton Publishers, pp.186-208.
- Koegel, R.L., Bimbela, A. and Schreibman, L. (1996) Collateral Effects of Parent Training on Family Interactions, *Journal of Autism and Developmental Disorders*, Vol. 26 (3), pp. 347-359.
- Koegel, L.K. and Brown, F. (2007) Autism Spectrum Disorders: Trends, Treatments, and Diversity, *Research and Practice for Persons with Severe Disabilities*, Vol. 32 (2), pp. 87-88.

- Kogan, M.D., Blumberg, S.J., Schieve, L.A., Boyle, C.A., Perrin, J.M., Ghandour, R.M., Singh, G.P., Strickland, B.B., Trevathan, E., Van Dyck, P.C. (2009) *Prevalence of Parent-Reported Diagnosis of Autism Spectrum Disorder Among Children in the US, 2007*, Accessed online Sunday 11<sup>th</sup> October 2009 at <http://pediatrics.aappublications.org/cgi/content/abstract/peds.2009-1522v1>
- Kurtzig, J. (1986) IEPs: Only Half the Picture, *Journal of Learning Disabilities*, Vol. 19 (7), p. 447.
- Kuttler, S., Smith-Myles, B. and Carlson, J.K. (1998) The use of Social Stories to Reduce Precursors to Tantrum Behavior in a Student with Autism, *Focus on Autism and Other Developmental Disabilities*, Vol. 13 (3), pp. 176-182.
- Kvale, S. (1996) *An Introduction to Qualitative Research Interviewing*, Thousand Oaks: Sage Publications.
- Kyriazopoulou, M. and Weber, H. (eds) (2009) *Development of a Set of Indicators – For Inclusive Education in Europe*, Odense: European Agency for Development in Special Needs Education.
- Lámh (2009) *About Lámh*, Accessed online on Monday 31<sup>st</sup> August 2009 at <http://www.lamh.org/About-Lamh.aspx>
- Larkin, M.J. (2001) Providing Support for Student Independence Through Scaffolded Instruction, *Teaching Exceptional Children*, Vol. 34 (1), pp. 30-34.
- Lather, P. (1986) Research as Praxis, *Harvard Educational Review*, Vol. 56 (3), pp. 257- 277.
- Lawlor, A. (2008) Professional Challenges, *Intouch, Issue 92, March 2008*, pp. 26-28.
- Lawlor, L. (2002) *The Evolving Role of the Special Needs Assistant from an Extra Pair of Hands to a Learning Support Assistant: Towards a New Synergy*, Unpublished Master's Thesis, University of Limerick, Limerick.
- Lawlor, L. and Cregan, A. (2003) The Evolving Role of the Special Needs Assistant: Towards a New Synergy, *REACH Journal of o Special Needs Education in Ireland*, Vol. 16 (2), pp. 83-93.
- Lawson, W. (2000) *Life Behind Glass: A Personal Account of Autism Spectrum Disorder*, London: Jessica Kingsley Publishers.
- Lawson, W. (2002, 15<sup>th</sup> February) *Keys to Understanding and Working with the Spectrum of Autism. The Spectrum Diagnostic Assessment and Therapy Centre, The School of Psychology, Queen's University, Belfast*, Conference, The Regency Hotel, Dublin.

- Leader, G. (2007, April 13<sup>th</sup>) Building a Sound Base, *The Irish Examiner*, p.17.
- Leader, G., Leslie, J., Tierney, K., Healy, O., Cullinan, V. and Honan, R. (2008, February 15<sup>th</sup>) Time for the Minister to Learn about Autism, *The Irish Times*, p. 16.
- Leaf, R. and McEachin, J. (eds) (1999) *A Work in Progress: Behaviour Management Strategies and a Curriculum for Intensive Behavioural Treatment of Autism*, New York: DRL Books.
- Learning, B. and Watson, T. (2006) From the Inside Looking Out – An Intensive Interaction Group for People with Profound and Multiple Learning Disabilities, *British Journal of Learning Disabilities*, Vol. 34 (2), pp. 103-109.
- Le Compte, M.D., Preissle, J. and Tesch, R. (1993) *Ethnography and Qualitative Design in Educational Research* (2<sup>nd</sup> ed), San Diego: Academic Press.
- Legoff, D.B. and Sherman, M. (2006) Long-Term Outcome of Social Skills Intervention Based on Interactive Lego© Play, *Autism*, Vol. 10 (4), pp. 317-329.
- Lee, A. and Hobson, R.P. (2006) Drawing Self and Others: How do Children with Autism Differ from Those with Learning Difficulties?, *British Journal of Developmental Psychology*, Vol. 24, (3) pp. 547–565.
- Lévi-Strauss, C. (1966) *The Savage Mind*, Chicago: The University of Chicago Press.
- Lewi-Dumont, N. (2009, 7<sup>th</sup> July) *Blind Teenage Students' Expectations. The International Council for the Education of People with Visual Impairment (ICEVI), 7<sup>th</sup> Annual Conference*, Trinity College, Dublin.
- Lewis, A. and Lindsay, G. (2000) Emerging Issues. In Lewis, A. and Lindsay, G. (eds) *Researching Children's Perspectives*, Buckingham: Open University Press, pp. 189-197.
- Lewis, A and Norwich, B. (2000) *Mapping a Pedagogy for Special Educational Needs*, Exeter: University of Exeter and University of Warwick.
- Lewis, A. and Norwich, B. (2005) Overview and Discussions: Overall Conclusions. In Lewis, A. and Norwich, B. (eds) *Special Teaching for Special Children: Pedagogies for Inclusion*, Maidenhead:Open University Press, pp. 206-221.
- Lewis, V. and Boucher, J. (1988) Spontaneous, Instructed and Elicited Play in Relatively Able Autistic Children, *British Journal of Developmental Psychology*, Vol. 6, pp. 325-339.
- Lewis, V. and Boucher, J. (1990) Guessing or Creating: A Reply to Baron-Cohen, *British Journal of Developmental Psychology*, Vol. 8, pp. 205-206.
- Lieberson, S. (2000) Small N's and Big Conclusions. In Gomm, R., Hammersley, M. and Foster, P. (eds) *Case Study Method*, London: Sage, pp. 208–222.

- Lilienfeld, S.O. and Arkowitz, H. (2007) Autism: An Epidemic, *Scientific American Mind*, April/May, pp. 82-83.
- Lincoln, Y. and Guba, E.G. (1985) *Naturalistic Inquiry*, Beverley Hills: Sage Publications.
- Lincoln, Y.S. and Guba, E.J. (2000) The Only Generalisation is. There is No Generalisation. In Gomm, R., Hammersley, M. and Foster, P. (eds) *Case Study Method*, London: Sage, pp. 27-44.
- Lindsay, G. (2007) Educational Psychology and the Effectiveness of Inclusive Education/Mainstreaming, *British Journal of Educational Psychology*, Vol. 77 (1), pp. 1-24.
- Lindsay, G. and Thompson, D. (1997) Values and Special Education. In Lindsay, G. and Thompson, D. (eds) *Values into Practice in Special Education*, London: David Fulton Publishers, pp.2-14.
- Logan, A. (2001) Collaboration Between Teachers and Special Needs Assistants in Mainstream Primary Schools, *REACH Journal of Special Needs Education in Ireland*, Vol. 15 (1), pp. 33-42.
- Logan, A. (2006) The Role of the Special Needs Assistant Supporting Pupils with Special Educational Needs in Irish Mainstream Primary Schools, *Support for Learning*, Vol. 21 (2), pp. 92-99.
- Logan, L. and Sachs, J. (1991) Which Teacher Development Project, *School Organisation*, Vol. 11 (3), pp. 303-311.
- Lordan, M. (2002) Assessment and IEP Development for Young Children with Autism, *REACH Journal of Special Needs Education in Ireland*, Vol. 5 (2), pp. 66-77.
- Lorenz, S. (1998) *Effective In-Class Support: The Management of Support Staff in Mainstream and Special Schools*, London: David Fulton Publishers.
- Loughrey, D. (2007) Experience of Competence-Based Initial Teacher Education in Northern Ireland within a Partnership Approach. In Dolan, R. and Gleeson, J. (eds) *The Competencies Approach to Teacher Professional Development: Current Practice and Future Prospects*, Armagh: Standing Conference on Teacher Education North and South, pp. 49-59.
- Lovaas, O.I. (1981) *Teaching Developmentally Disabled Children: The ME Book*, Austin: Pro-ed.
- Lovaas, O.I. (1987) Behavioural Treatment and Normal Educational and Intellectual Functioning in Young Autistic Children, *Journal of Consulting and Clinical Psychology*, Vol. 55 (1), pp. 3-9.

- Lovaas, O.I. (2003) *Teaching Individuals with Developmental Delays: Basic Intervention Techniques*, Austin: Pro-Ed.
- Lovaas, O.I. and Smith, T. (1989) A Comprehensive Behavioural Theory of Autistic Children: Paradigm for Research and Treatment, *Journal of Behaviour Therapy and Experimental Psychiatry*, Vol. 20, pp. 17-29.
- Lundström, F., McCananey, D. and Webster, B. (2000) The Changing Face of Disability Legislation, Policy and Practice in Ireland, *European Journal of Social Security*, Vol. 2 (4), pp. 379-397.
- Macintosh, K.E. and Dissanayake, C. (2004) Annotation: The Similarities and Differences between Autistic Disorder and Asperger's Disorder: A Review of the Empirical Evidence, *Journal of Child Psychology and Psychiatry*, Vol. 45 (3), pp. 421-434.
- Magiati I. and Howlin P. (2003) A Pilot Evaluation Study of the Picture Exchange Communication System (PECS) for Children with Autistic Spectrum Disorders, *Autism*, Vol. 7 (3), pp. 297-320.
- Magiati, I., Charman, T. and Howlin, P. (2007) A Two-Year Prospective Follow-Up Study of Community-Based Early Intensive Behavioural Intervention and Specialist Nursery Provision for Children with Autism Spectrum Disorders, *Journal of Child Psychology and Psychiatry*, Vol. 48 (8), pp. 803-812.
- Male, T. and Male, D.B. (2001) Special School Headteachers' Perceptions of Role Readiness, *European Journal of Special Needs Education*, Vol. 16 (2), pp. 149-166.
- Mandlawitz, M.R. (2002) The Impact of the Legal System on Educational Programming for Young Children with Autism Spectrum Disorders, *Journal of Autism and Developmental Disorders*, Vol. 32 (5), pp. 495-508.
- Marcos, J.J.M., Sánchez, E. and Tillema, H. (2008) Teachers Reflecting on their Words: Articulating What is Said about What is Done, *Teachers and Teaching*, Vol. 14 (2), pp. 95-114.
- Marlett, N. and Buchner, D. (1992) Special Education Funding for Children with Severe Disabilities in Alberta. In Booth, T., Swann, W., Masterton, M. and Potts, P. (eds) *Policies for Diversity in Education*, London: Routledge, pp. 297-304.
- Marte Meo (2009) *Frequently Asked Questions*, Accessed online on Friday 31<sup>st</sup> July 2009 at <http://www.martemeo.com/site/about/faq.cfm>.
- Marvin, C. (1998) Individual and Whole Class teaching. In Tilstone, C., Florian, L. and Rose, R. (eds) *Promoting Inclusive Practice*, London: Routledge, pp. 138-156.



- Marvin, C. and Tilstone, C. (2002) Assessment in the Classroom. In *Unit 1, Learning Difficulties: Assessment and Curriculum, Module Code 11 11467/1105494, Unit 1, DE Course Learning Difficulties (Severe and Moderate), School of Education, The University of Birmingham.*
- Marwick, H., Dunlop, A.L. and McKay, T. (2005) *National Centre for Autism Studies Literature Review of Autism for HM Inspectorate of Education, Strathclyde: University of Strathclyde.*
- Maslow, A.H. (1962) *Toward a Psychology of Being*, Princeton: Van Nostrand.
- Maurice, C., Green, G. and Foxx, R. (2001) *Making a Difference; Behavioural Interventions for Autism*, Austin: Pro-Ed.
- McAuliffe, M. (2010) *Personal Communication*, Sunday 17<sup>th</sup> January 2010.
- McCarthy, C., McNally, D., McLoughlin, P., O'Connell, M., Slattery, W. and Walsh, M. (2009) *Report of the Special Group on Public Service Numbers and Expenditure Programmes, Volume 11: Detailed Papers*, Department of Finance: Stationery Office. Accessed on Friday October 23<sup>rd</sup> 2009 at <http://www.finance.gov.ie/documents/pressreleases/2009/bl100vol2.pdf>
- McCarthy, J. (2006) The IEP Process: Current Practice and Perspectives, *REACH Journal of Special Needs Education in Ireland*, Vol. 19 (2), pp 112-121.
- McCarthy, J. (2008) *Mother Warriors*, New York: Penguin Group (USA) Inc.
- Mc D v. Minister for Education and Science, Health Service Executive, Ireland and the Attorney General, *Judgement Delivered by Mr. Justice O'Neill on the 29<sup>th</sup> day of July 2008.*
- McDonnell, P. (1992) Vested Interests in the Development of Special Education in Ireland, *REACH Journal of Special Needs Education in Ireland*, Vol. 5 (2), pp 97-106.
- McDonnell, P. (2003) Developments in Special Education in Ireland, Deep Structures and Policy Making, *International Journal of Inclusive Education*, Vol. 7 (3), pp. 259-269.
- McEachin, J.J., Smith, T. and Lovaas, O.I. (1993) Long-term Outcomes for Children with Autism who Received Early Intensive Behavioural Treatment, *American Journal on Mental Retardation*, Vol. 97 (4), pp. 359-372.
- McGee, G. G., Menolascino, F.J., Hobbs, D.C. and Menousek, P.E. (1987) *Gentle Teaching: A Non-aversive Approach for Helping Persons with Mental Retardation*, New York: Human Sciences Press Incorporated.
- McGee, P. (1989-90) Acts, Commissions and Change, *REACH Journal of Special Needs Education in Ireland*, Vol. 3 (1), pp. 11-13.

- McGee, P. (1990) Special Education in Ireland, *European Journal of Special Needs Education*, Vol. 5, pp. 48-64.
- McGee (2004) Reflections on Irish Special Education over Four Decades, *REACH Journal of Special Needs Education in Ireland*, Vol. 17 (2), pp. 67-80.
- McIntyre, D. (2009) The Difficulties of Inclusive Pedagogy for Initial Teacher Education and Some Thoughts on the Way Forward, *Teaching and Teacher Education*, Vol. 25 (4), pp. 602-608.
- McKay, T. and Dunlop, A.W. (2004) *The Development of a National Training Framework for Autistic Spectrum Disorders: A Study of Training for Professionals working in the Field of ASD in Scotland*, Glasgow: National Autistic Society and The University of Strathclyde.
- McKeon, M. (2005) Autism: A Short History, *Frontline*, Vol. 63, pp. 18-19.
- Measor, L. (1985) Critical Incidents in the Classroom: Identities, Choices and Careers. In Ball, S.J. and Goodson, I.F. (eds) *Teachers' Lives and Careers*, London: The Falmer Press.
- Medhurst, B. and Clay, D. (2008) The Thomas Outreach Project (TOP): An Early Intervention for Children with an Autistic Spectrum Disorder (ASD), *Educational Psychology in Practice*, Vol. 24 (1), pp. 69-78.
- Merriam, S.B. (1998) *Qualitative Research and Case Study Applications in Education*, San Francisco: Jossey-Bass.
- Mesibov, G.B. (1993) Treatment Outcome is Encouraging, *American Journal on Mental Retardation*, Vol. 97 (4), pp. 379-380.
- Miles, M.B. and Huberman, M.A. (1994) *Qualitative Data Analysis* (2<sup>nd</sup> ed), Thousand Oaks, Sage.
- Miron, T. (2006) Circle of Devotion. In Ariel, C.N. and Naseef, R.A. (eds) *Voices from the Spectrum*, London: Jessica Kingsley Publishers, pp. 241-244.
- Montgomery, D. (1999) *Positive Teacher Appraisal through Classroom Observation*, London: David Fulton Publishers.
- Moon, J.A. (1999) *Reflection in Learning and Professional Development*, London: RoutledgeFalmer.
- Moore, M., Beazley, S. and Maelzer, J. (1995) *Researching Disability Issues*, Buckingham, Open University Press.
- Moore, D.G., Hobson, R.P. and Lee, A. (1997) Components of Person Perception: An Investigation with Autistic, Non-Autistic Retarded and Typically Developing Children and Adolescents, *British Journal of Developmental Psychology*, Vol. 15 (3), pp. 401-423.

- Mottron, L., Burack, J.A., Iarocci, G., Belleville, S. and Enns, J.T. (2003) Locally Oriented Perception with Intact Global Processing among Adolescents with High-Functioning Autism: Evidence from Multiple Paradigms, *Journal of Child Psychology and Psychiatry*, Vol. 44 (6), pp. 904-913.
- Muijs, D., Day, C., Harris, A. and Lindsay, G. (2004) Evaluating CPD: An Overview. In Day, C. and Sachs, J. (eds) *International Handbook on the Continuing Professional Development of Teachers*, Maidenhead: Open University Press, pp. 291-310.
- Mundy, P. and Crowson, A. (1997) Joint Attention and Early Social Communication: Implications for Research on Intervention with Autism, *Journal of Autism and Developmental Disorders*, Vol. 27 (6), pp 653-656.
- Murray, D.K.C. (1997) Autism and Information Technology: Therapy with Computers. In Powell, S. and Jordan, R. (eds) *Autism and Learning: A Guide To Good Practice*, London: David Fulton Publishers, pp. 100-117.
- Nagle v. the South Western Health Board, the Minister for Education and Science, the Minister for Health and Children, Ireland and the Attorney General, and by Order the Board of Management of Our Lady's Boys' National School, Ballinteer, *Judgement Delivered by Mr. Justice Herbert on the 30<sup>th</sup> October, 2001*.
- National Autistic Society (NAS) (2002) *Autism Accreditation: Ensuring Quality Provision for People with an Autistic Spectrum Disorder*, London: NAS.
- National Autistic Society (NAS) (2009) *Autism: What is it?*, Accessed online on Friday 27<sup>th</sup> November 2009 at <http://www.nas.org.uk/nas/jsp/polopoly.jsp?d=211isp?d=>
- National Council for Curriculum and Assessment (NCCA) (1999) *Primary School Curriculum: An Introduction*, Dublin: The Stationery Office.
- National Council for Curriculum and Assessment (NCCA) (2007a) *Guidelines for Teachers of Students with General Learning Disabilities*, Dublin: NCCA.
- National Council for Curriculum and Assessment (NCCA) (2007b) *Guidelines for Teachers of Students with Mild General Learning Disabilities*, Dublin: NCCA.
- National Council for Curriculum and Assessment. (NCCA) (2007c) *Guidelines for Teachers of Students with Moderate General Learning Disabilities*, Dublin: NCCA.
- National Council for Curriculum and Assessment (NCCA) (2007d) *Guidelines for Teachers of Students with Severe and Profound General Learning Disabilities*, Dublin: NCCA.

- National Council for Curriculum and Assessment (NCCA) (2009a) *Primary Curriculum*, Accessed online on Sunday 26<sup>th</sup> July 2009 at [http://www.curriculumonline.ie/en/Primary\\_School\\_Curriculum/](http://www.curriculumonline.ie/en/Primary_School_Curriculum/)
- National Council for Curriculum and Assessment (NCCA) (2009b) *Arts Education: Visual Arts*, Accessed online on Sunday 26<sup>th</sup> July 2009 at [http://www.curriculumonline.ie/en/Primary\\_School\\_Curriculum/Arts\\_Education/Visual\\_Arts/](http://www.curriculumonline.ie/en/Primary_School_Curriculum/Arts_Education/Visual_Arts/)
- National Council for Curriculum and Assessment (NCCA) (2009c) *Arts Education: Music Arts*, Accessed online on Sunday 26<sup>th</sup> July 2009 at [http://www.curriculumonline.ie/en/Primary\\_School\\_Curriculum/Arts\\_Education/Music](http://www.curriculumonline.ie/en/Primary_School_Curriculum/Arts_Education/Music)
- National Council for Curriculum and Assessment. (NCCA) (2009d) *Physical Education*, Accessed online on Sunday 26<sup>th</sup> July 2009 at [http://www.curriculumonline.ie/en/Primary\\_School\\_Curriculum/Physical\\_Education/](http://www.curriculumonline.ie/en/Primary_School_Curriculum/Physical_Education/)
- National Council for Curriculum and Assessment (NCCA) (2009e) *Social, Personal and Health Education*, Accessed online on Sunday 26<sup>th</sup> July 2009 at [http://www.curriculumonline.ie/en/Primary\\_School\\_Curriculum/Social\\_Personal\\_and\\_Health\\_Education\\_SPHE/](http://www.curriculumonline.ie/en/Primary_School_Curriculum/Social_Personal_and_Health_Education_SPHE/)
- National Council for Curriculum and Assessment (NCCA) (2009f) *Social, Environmental and Scientific Education*, Accessed online on Sunday 26<sup>th</sup> July 2009 at [http://www.curriculumonline.ie/en/Primary\\_School\\_Curriculum/Social\\_Environmental\\_and\\_Scientific\\_Education\\_SESE/](http://www.curriculumonline.ie/en/Primary_School_Curriculum/Social_Environmental_and_Scientific_Education_SESE/)
- National Council for Curriculum and Assessment (NCCA) (2009g) *Aistear. The Early Childhood Curriculum Framework*, Dublin: NCCA.
- National Council for Special Education (NCSE) (2006a) *Implementation Report: Plan for the Phased Implementation of the EPSEN Act 2004*, Trim: NCSE.
- National Council for Special Education (NCSE) (2006b) *Guidelines on the Individual Education Plan Process*, Trim: NCSE.
- National Council for Special Education (NCSE) (2009) *Personal Communication*, Thursday 5<sup>th</sup> November 2009.
- National Initiative for Autism: Screening and Assessment (NIASA) (2003) *National Autism Plan for Children (NAPC): Planning for the Identification, Assessment, Diagnosis and Access to Early Interventions for Pre-school and Primary Aged School Children with Autistic Spectrum Disorders*, London: The National Autistic Society.
- National Research Council (2001a) *Committee on Educational Interventions for Children with Autism: Educating Children with Autism*, Division of Behavioral and Social Sciences and Education, Washington, DC: National Academy Press.

- National Research Council (2001b) *The Power of Video Technology in International Comparative Research in Education*, Washington, DC: National Academy Press.
- Nazeer, K. (2006) *Send in the Idiots or How We Grew to Understand the World*, London: Bloomsbury.
- New York State Department of Health (1999) *Clinical Practice Guideline: The Guideline Technical Report: Autism/Pervasive Developmental Disorders: Assessment and Intervention for Young Children (age 0-3 years)*, New York: New York State Department of Health.
- Nilholm, C. (2006) Special Education, Inclusion and Democracy, *European Journal of Special Needs Education*, Vol. 21 (4), pp. 431-445.
- Nind, M. (1999) Intensive Interaction and Autism: A Useful Approach, *British Journal of Special Education*, Vol. 26 (2), pp. 96-102.
- Nind, M. and Hewett, D. (1998) Commentary Three: Learners with Autism. Parents Doing Intensive Interaction. In Hewett, D. and Nind, M. (eds) *Interactions in Action. Reflections on the Use of Intensive Interaction*, London: David Fulton Publishers, pp. 257-275.
- Nind, M. and Hewett, D. (2001) *A Practical Guide to Intensive Interaction*, Kidderminster: British Institute of Learning Disabilities.
- Norris, C. and Dattilo, J. (2000) Evaluating Effects of a Social Story Intervention on a Young Girl with Autism, *Focus on Autism and Other Developmental Disabilities*, Vol. 14 (3), pp. 180-186.
- Norwich, B. (1990) *Reappraising Special Needs Education*, London: Cassell.
- Norwich, B. (1993) Towards Effective Schools for All. A Response by Brahm Norwich. In Special Educational Needs Policy Group *Policy Options for Special Educational Needs in the 1990s, Seminar Paper 2, Towards Effective Schools for All*, Stafford: The National Association for Special Needs (NASEN), pp. 19-22.
- Norwich, B. (1996) Special Needs Education or Education for All: Connective Specialisation and Ideological Impurity, *British Journal of Special Education*, Vol. 23 (3), pp. 100-103.
- Norwich, B. (1999) Review Article. Special or Inclusive Education, *European Journal of Special Needs Education*, Vol. 14 (1), pp. 90-96.
- Norwich, B. (2000) Inclusion in Education. From Concepts, Values and Critique to Practice. In Daniels, H. (ed.) *Special Education Reformed: Beyond Rhetoric*, London: Falmer Press, pp. 255-267.
- Norwich, B. (2006) *NASEN London Policy Talk, Oct. 06 PPT, Personal E-Mail Communication*, (18<sup>th</sup> October 2006).

- Norwich, B. and Lewis, L. (2005) How Specialised is Teaching Pupils with Disabilities and Difficulties? In Lewis, A. and Norwich, B. (eds) *Special Teaching for Special Children: Pedagogies for Inclusion*, Maidenhead, Open University Press, pp. 1-14.
- Nugent, M. (2002) Teachers' Views of Working with Individual Education Plans in an Irish Special School, *Reach*, Vol. 15 (2), pp. 98-112.
- O'Brien, C. (2002, March 6<sup>th</sup>) State Faces up to 100 Autism Court Cases. Three Settlements in Last Fortnight, *The Irish Examiner*, p.4.
- O'Brien, G. and Pearson, J. (2004) Autism and Learning Disability, *Autism*, Vol. 8 (2), pp. 125-140.
- O'Carolan v. The Minister for Education and Science, the Minister for Health and Children and the Northern Health Board, *Judgement Delivered by Mr. Justice MacMenamin on the 15<sup>th</sup> day of June 2005*.
- O'Cuanacháin v. The Minister for Education and Science, the Minister for Health and Children, the Health Service Executive, Ireland and the Attorney General, *Judgement Delivered by Mr. Justice Peart on 16<sup>th</sup> May 2007*.
- O'Cuilleanáin, T. (1968) Special Education in Ireland, *Oideas*, Vol. 1 (1), pp.6-15.
- O'Donoghue v. The Minister for Health, Minister for Education, Ireland and the Attorney General, *Judgement Delivered by Mr. Justice O'Hanlon on the 27<sup>th</sup> May, 1993*.
- O'Donoghue v. The Minister for Health, Minister for Education, Ireland and the Attorney General, *Judgement Delivered by the Supreme Court on the 6<sup>th</sup> February 1997*.
- O'Donovan, P.F. (1992) *The National School Inspectorate and its Administrative Context in Ireland 1870-1962*, Unpublished Ph.D. Thesis, Dublin: University College Dublin.
- O'Gorman, E., Drudy, S., Winter, E., Smith, R. and Barry, M. (2009) *Professional Development for Post-Primary Special Educational Needs Teachers in Northern Ireland and the Republic of Ireland*, Armagh: The Center for Cross Border Studies.
- O'Halloran, B. (2000) Another Brick in the Wall, *Law Society Gazette*, November 2000, pp. 14-17.
- O'Keeffe, B. (2008, November 4<sup>th</sup>) *Aspects of the Education for Persons with Special Educational Needs Act, 2004 that Have Been Deferred*, Parliamentary Question: Dáil Éireann.

- O’Keeffe v. Hickey and The Minister for Education and Science, Ireland and the Attorney General, *Judgement Delivered by the Supreme Court on the 19<sup>th</sup> December 2008*.
- O’Loughlin, C. (2006, January 14<sup>th</sup>) Parents Sue State for Autistic Son’s Education, *The Irish Independent*, p.12.
- O’Mahoney, C. (2006) *Educational Rights in Irish Law*, Dublin: Thomson Round Hall.
- O’Murchú, E. (1998) Education (No. 2) Bill: Where are the Guarantees?, *REACH Journal of Special Needs Education in Ireland*, Vol. 11 (2), pp. 76-81.
- O’Neill, A. and Rose, R. (2008) The Changing Roles of Teaching Assistants in England and Special Needs Assistants in Ireland: A Comparison, *REACH Journal of Special Needs Education in Ireland*, Vol. 22 (1), pp. 48-58.
- O’Rourke, S. (2004, October 13<sup>th</sup>) Hanafin Decides Not to Pursue Costs in Clare Family Case: Interview with Ernest Cantillon, Solicitor, *RTE Radio 1 News at One*, Accessed online on Sunday 5<sup>th</sup> November 2006 at <http://www.rte.ie/news/2004/1013/news1pm.html>
- O’Shaughnessy, M. (2008) Labelling Children with Special Educational Needs: To Label or Not to Label, *Reach*, Vol. 21 (2) pp. 67-76.
- O’Toole, J. (2006) *Education for Persons with Special Educational Needs Act 2004: An Interpretation for Teachers*, Dublin: Office of Independent Senator Joe O’Toole.
- Oakley, A. (2004) The Researcher’s Agenda for Evidence and Policy, *Evaluation and Research in Education*, Vol. 18 (1&2), pp. 12-27.
- Odom, S.E. and Strain, P.S. (1984) Peer-Mediated Approaches to Promoting Children’s Social Interaction: A Review, *American Journal of Orthopsychiatry*, Vol. 54, pp. 544-557.
- Office for Standards in Education (OFSTED) (2006) *Inclusion: Does it Matter Where Pupils are Taught*, London: HMSO.
- Okely, J. (1994) Thinking through Fieldwork. In Bryman, A. and Burgess, R.G. (eds) *Analysing Qualitative Data*, London: Routledge, pp. 18 – 34.
- Oliver, M. (1992) Changing the Social Relations of Research Production, *Disability, Handicap and Society*, Vol. 7(2), pp. 101-114.
- Oliver, M. (1995) Does Special Education Have a Role to Play in the Twenty-First Century?, *Reach*, Vol. 11(2), pp. 71-75.
- Organisation for Economic Co-Operation and Development (OECD) (1991) *Reviews of National Policies for Education: Ireland*, Paris: OECD.

- Organisation for Economic Co-Operation and Development (OECD) (2005) *Teachers Matter: Attracting, Developing and Retaining Effective Teachers*, Paris: OECD.
- Orr, T.J., Smith-Myles, B. and Carlson, J.K. (1998) The Impact of Rhythmic Entrainment on a Person with Autism, *Focus on Autism and Other Developmental Disabilities*, Vol. 13 (3), pp. 163-166.
- Ozonoff, S. and Jensen, J. (1999) Brief Report: Specific Executive Function Profiles in Three Neurodevelopmental Disorders, *Journal of Autism and Developmental Disorders*, Vol. 29 (2), pp. 171-177.
- Osborne, J. (2003) Art and the Child with Autism: Therapy or Education?, *Early Child Development and Care*, Vol. 173 (4), pp. 411-423.
- Osborne, L.A. and Reid, P. (2008) An Evaluation of the Role of Reinforcement-Based Interventions in Determining the Effectiveness of "Eclectic" Approaches for Teaching Children with Autism Spectrum Disorders, *Behavioral Development Bulletin*, Vol. 14, Spring 2008, pp. 30-39.
- Osborough, W.N. (1978) Education in the Irish Law and Constitution, *The Irish Jurist*, Vol. 151, pp. 145-180.
- Ostryn, C., Wolfe, P.S. and Rusch, F.R. (2009) A Review and Analysis of the Picture Exchange Communication System (PECS) for Individuals with Autism Spectrum Disorders Using a Paradigm of Communication Competence, *Research and Practice for Persons with Severe Disabilities*, Vol. 33 (1-2), pp. 13-24.
- Paechter, C. (2003) On Goodness and Utility in Educational Research. In Sikes, P. Nixon, J. and Carr, W. (eds) *The Moral Foundations of Educational Research: Knowledge, Inquiry and Values*, Maidenhead: Open University Press, pp. 105-117.
- Panerai, S., Ferrante, L. and Zingale, M. (2002) Benefits of the Treatment and Education of Autistic and Communication Handicapped Children (TEACCH) Programme as Compared with a Non-Specific Approach, *Journal of Intellectual Disability Research*, Vol. 46 (4), pp. 318-327.
- Park, K. (1997) How do Objects become Objects of Reference? Review of the Literature on Objects of Reference and a Proposed Model for the Use of Objects in Communication, *British Journal of Special Education*, Vol. 24 (3), pp. 108-114.
- Parkinson, S. (2001) Special Education Policy in the Republic of Ireland and the Influence of Circular 8/99 on a Developing National Educational Psychology Service, *The Irish Journal of Psychology*, Vol. 22 (3-4), pp. 257-268.



- Parsons, S., Guldberg, K., MacLeod, A., Jones, G., Prunty, A. and Balfe, T. (2009) *International Review of the Literature of Evidence of Best Practice Provision in the Education of Persons with Autistic Spectrum Disorders*, Accessed online on Monday Januar 25<sup>th</sup> at [http://www.ncse.ie/uploads/1/Autism\\_Report.pdf](http://www.ncse.ie/uploads/1/Autism_Report.pdf)
- Pasiali, V. (2004) The Use of Prescriptive Therapeutic Songs in a Home-Based Environment to Promote Social Skills Acquisition by Children with Autism: Three Case Studies, *Music Therapy Perspectives*, Vol. 22 (1), pp. 11-20.
- Patton, M.Q. (1990) *Qualitative Evaluation and Research Methods*, Newbury Park: Sage Publications.
- Pawson, R. and Tilley, N. (1997) *Realistic Evaluation*, London: Sage Publications.
- Peberdy, A. (1993) Observing. In Shakespeare, P., Atkinson, D. and French, S. (eds) *Reflecting on Research Practice*, London: Routledge, pp. 47 – 57.
- Peck, A. C. and Furman, G.C. (1992) Qualitative Research in Special Education: An Evaluative Review. In Gaylord-Ross, R (ed.) *Issues and Research in Special Education* (vol. 2), New York: Teachers College Press, pp. 1-42.
- Peck, A.F. and Scarpati, S. (2004) Collaboration in the Age of Accountability, *Teaching Exceptional Children*, Vol. 36 (5); p.7-7.
- Peeters, T. (1997) *Autism. From Theoretical Understanding to Educational Intervention*, London: Whurr Publishers Ltd.
- Peeters, T. (2003) Foreword. In Bogdashina, O. *Sensory Perceptual Issues in Autism and Asperger Syndrome*, London, Jessica Kingsley Publishers, pp. 13-18.
- Peterson, C.C. and Siegal, M. (1999) Representing Inner Worlds: Theory of Mind in Autistic, Deaf and Normal Hearing Children, *Psychological Science*, Vol. 10 (2), pp. 126-129.
- Peterson, C.C. and Slaughter, V.P. (2006) Telling the Story of Theory of Mind: Deaf and Hearing Children's Narratives and Mental State Understanding, *British Journal of Developmental Psychology*, Vol. 24, pp.151-179.
- Peterson, C.C., Wellman, H.M. and Liu, D. (2005) Steps in Theory-of-Mind Development for Children with Deafness and Autism, *Child Development*, Vol. 76 (2), pp. 502-517.
- Phelan, P. and Reynolds, P. (1996) *Argument and Evidence: Critical Analysis for the Social Sciences*, London: Routledge.
- Pink, S. (2007) *Doing Visual Ethnography* (2<sup>nd</sup> ed), London: Sage Publications.
- Plimley, L. and Bowen, M. (2006) *Supporting Pupils with Autistic Spectrum Disorders. A Guide for School Support Staff*, London: Paul Chapman Publishing.

- Porter, J. and Ashdown, R. (2002) *Pupils with Complex Learning Difficulties: Promoting Learning using Visual Materials and Methods*, Tamworth: NASEN.
- Porter, J. and Lacey, P. (2005) *Researching Learning Difficulties*, London: Paul Chapman Publishing.
- Porter, J., Parsons, S. and Robertson, C. (2006) Time for Review: Supporting the Work of an Advisory Group, *Journal of Research in Special Educational Needs*, Vol. 6 (1), pp. 11-16.
- Potter, C. and Whittaker, C. (2001) *Enabling Communication in Children with Autism*, London: Jessica Kingsley Publishers.
- Pound, L. (2005) *How Children Learn*, London: Step Forward Publishing Limited.
- Poulson, L. and Avramidis, E. (2003) Pathways and Possibilities in Professional Development: Case Studies of Effective Teachers of Literacy, *British Educational Research Journal*, Vol. 29 (4), pp. 543-560.
- Powell, D. and Hyle, A.E. (1997) Principals and School Reform: Barriers to Inclusion in Three Secondary Schools, *Journal of School Leadership*, Vol. 7 (4) pp. 301-326
- Powell, S. and Jordan, R. (1993) Diagnosis, Intuition and Autism, *British Journal of Special Education*, Vol. 20 (1), pp. 26-29.
- Powell, S. and Jordan, R. (1997) Rationale for the Approach. In Powell, S. and Jordan, R. (eds) *Autism and Learning: A Guide to Good Practice*, London: David Fulton Publishers, pp. 1-14.
- Powell, E., Terrell, I., Furey, S. and Scott-Evans, A. (2003) Teachers' Perceptions of the Impact of CPD: An Institutional Case Study, *Journal of In-service Education*, Vol. 29 (3), pp. 389-404.
- Powers, S. (1996) Inclusion is an Attitude Not a Place: Part 1, *The Journal of the British Association of Teachers of the Deaf*, Vol. 20 (2), pp. 35-41.
- Preis, J. (2007) Strategies to Promote Adaptive Competence for Students on the Autism Spectrum, *Support for Learning*, Vol. 22 (1), pp. 17-23.
- Primary Professional Development Service (PPDS) (2009) *Annual Report 2008/2009*, Accessed online on Saturday January 30<sup>th</sup> 2010 at [http://ppds.ie/images/stories/LatestNews/ppdsannual%20report%202008\\_2009.pdf](http://ppds.ie/images/stories/LatestNews/ppdsannual%20report%202008_2009.pdf)
- Prizant, B.M. (1996) Communication, Language, Social and Emotional Development, *Journal of Autism and Developmental Disorders*, Vol. 26 (2), pp. 173-177.

- Qualifications, Curriculum and Assessment Authority for Wales (2000) *A Structure for Success: Guidance on the National Curriculum and Autistic Spectrum Disorder*, Cardiff: Qualifications, Curriculum and Assessment Authority for Wales.
- Quinn, G. (2000) Disability and Human Rights: A Survey of International Law and Practice. In O'Driscoll, D. (ed.) *Irish Human Rights Review 2000*, Dublin: Roundhall, Sweet and Maxwell, pp. 110-156.
- Rammler, L.H. (2007) *Labels on the Autism Spectrum: A New View*, Accessed online on Friday November 27<sup>th</sup> 2009 at <http://www.autismdifferences.org/AutismMACS.pdf>
- Reynhout, G. and Carter, M. (2007) Social Stories Efficacy with A Child with Autism Spectrum Disorder and Moderate Intellectual Disability, *Focus on Autism and Other Developmental Disabilities*, Vol. 22 (3), pp. 173-182.
- Rhodes, C. and Houghton-Hill, S. (2004) The Linkage of Continuing Professional Development and the Classroom Experience of Pupils. Barriers Perceived by Senior Managers in Some Secondary Schools, *Journal of In-service Education*, Vol. 26, pp. 419-435.
- Riehl, C.J. (2000) The Principal's Role in Creating Inclusive Schools for Diverse Students; A Review of Normative, Empirical and Critical Literature on the Practice of Educational Administration, *Review of Educational Research*, Vol. 70 (1), pp. 55-81.
- Riggs, C.G. (2001) Ask the Paraprofessionals What are Your Training Needs, *Teaching Exceptional Children*, Vol. 33 (3), pp. 78-83.
- Ring, M.E. (1997) A Right to Education, *The Bar Review*, April 1997, pp. 219-221.
- Robson, C. (2002) *Real World Research* (2<sup>nd</sup> ed), London: Routledge.
- Rogers, S. (1999) Intervention for Young Children with Autism: From Research to Practice, *Infants and Young Children*, Vol. 12 (2), pp. 1-16.
- Rogers, S.J. and Ozonoff, S. (2005) Annotation: What Do We Know About Sensory Dysfunction in Autism? A Critical Review of the Empirical Evidence, *Journal of Child Psychology and Psychiatry*, Vol. 46 (12) pp. 1255-1268.
- Romkema, C. (2002) *Embracing the Sky: Poems Beyond Disability*, Philadelphia: Jessica Kingsley Publishers.
- Rose, R. (2000) Using Classroom Support in a Primary School: A Single School Case Study, *British Journal of Special Education*, Vol. 27 (4), pp. 191- 196.
- Rouse, M. and Agbenu, R. (1998) Assessment and Special Educational Needs: Teachers' Dilemmas, *British Journal of Special Education*, Vol. 25 (2), pp. 81-87.

- Rousseau, J.J. (1964) *Émile*, Book 11 (On Education from Five to Twelve). In Archer, R.L. (ed.) *Jean Jacques Rousseau, His Educational Theories Selected from Émile, Julie and Other Writings: A Translation*, New York: Barrons Educational Series, pp. 87-145.
- Rowe, C. (1999) Do Social Stories Benefit Children with Autism in Mainstream Primary Schools?, *British Journal of Special Education*, Vol. 26 (1), pp. 12-14.
- Roeyers, H. (1995) A Peer-Mediated Proximity Intervention to Facilitate the Social Interactions of Children with a Pervasive Developmental Disorder, *British Journal of Special Education*, Vol. 22 (4), pp. 161-164.
- Ruble, L.A. and Scott, M.M. (2002) Executive Functions and the Natural Habitat Behaviours of Children with Autism, *Autism*, Vol. 6 (4), pp. 335-381.
- Russell Bernard, H. (1988) *Research Methods in Cultural Anthropology*, London: Sage.
- Sacks, O. (1995a) Foreword. In Grandin, T. *Thinking in Pictures and Other Reports from my Life with Autism*, New York: Vintage Books, pp. 11-16.
- Sacks, O. (1995b) *An Anthropologist on Mars*, London: Picador.
- Sasso, G.M. (2001) The Retreat from Inquiry and Knowledge in Special Education, *The Journal of Special Education*, Vol. 34 (4), pp. 178-193.
- Sainsbury, C. (2000) *The Martian in the Playground: Understanding the Schoolchild with Asperger's Syndrome*, Bristol: Lucky Duck Publishing Ltd.
- Sallows, G.O. and Gropner, T.D. (2005) Intensive Behavioural Treatment for Children with Autism: Four-Year Outcome and Predictors, *American Journal on Mental Retardation*, Vol. 110 (6), pp. 417-438.
- Scattone, D., Wilczynski, S.M., Edwards, R.P. and Rabian, B. (2002) Decreasing Disruptive Behaviours of Children with Autism Using Social Stories, *Journal of Autism and Developmental Disorders*, Vol. 32 (6), pp. 535-543.
- Scheffel, D.L., Rude, H.A. and Bole, P.T. (2005) Avoiding Special Education Litigation in Rural School Districts, *Rural Special Education Quarterly*, Vol. 24 (4), pp. 3-8.
- Schindele, R.A. (1985) Research Methodology in Special Education: A Framework Approach to Special Problems and Solutions. In Hegarty, S. and Evans, P (eds) *Research and Evaluation Methods in Special Education*, Windsor, NFER-Nelson, pp. 3-24.
- Schön, D.A. (1983) *The Reflective Practitioner*, San Francisco: Jossey- Bass Publishers.

- Schön, D.A. (1987) *Educating the Reflective Practitioner*, San Francisco: Jossey-Bass Publishers.
- Schopler, E. (2001) TEACCH (Treatment and Education of Autistic and related Communication-handicapped Children. In The National Autistic Society (ed.) *Approaches to Autism*, London: The National Autistic Society, p. 68.
- Schopler, E., Brehm, S., Kinsbourne, M. and Reichler, R.J. (1971) The Effects of Treatment Structure on the Development of Autistic Children, *Archives of General Psychiatry*, Vol. 24, pp. 262-267.
- Schopler, E., Mesibov, G.B. and Hearshey, K. (1995) Structured Teaching in the TEACCH System. In Schopler, E. and Mesibov, G.B. (eds) *Learning and Cognition in Autism*, New York: Plenum Press, pp. 243-292.
- Schreibman, L. (2005) *The Science and Fiction of Autism*, Cambridge: Harvard University Press.
- Schreibman, L. (2007, 23<sup>rd</sup> January) *Pivotal Response Training, Autism in Educational Settings Programme, Centre for Irish Programmes, Boston College, University of San Diego, California.*
- Schwandt, T.A. (1997) *Qualitative Inquiry: A Dictionary of Terms*, Thousand Oaks: Sage Publications.
- Schwandt, T.A. and Halpern, E.S. (1988) *Linking Auditing and Metaevaluation: Enhancing Quality in Applied Research*, Newbury Park: Sage Publications.
- Scott, D. (2000) *Reading Educational Research and Policy*, London: Routledge.
- Scott, I. (2009) Developing a Whole School Approach to Including Children with Autistic Spectrum Disorders in a Mainstream Primary School, *REACH Journal of Special Education in Ireland*, Vol. 22 (2), pp. 113-121.
- Scottish Intercollegiate Guidelines Network (SIGN) (2007) *Assessment, Diagnosis and Clinical Interventions for Children and Young People with Autism Spectrum Disorders: A National Clinical Guideline*, Edinburgh: SIGN.
- Seal, B.C. and Bonvillian, J.D. (1997) Sign Language and Motor Functioning in Students with Autistic Disorder, *Journal of Autism and Developmental Disorders*, Vol. 27 (4), pp. 437-466.
- Seach, D. (2002, Residential School 12-14 April) *Interactive Play for Children with Autism*, School of Education, The University of Birmingham.
- Sellin, B. (1993) *Messages From an Autistic Mind. I Don't Want to be Inside me Anymore*, New York: Basic Books.

- Shaked, M. and Yirmiya, N. (2004) Matching Procedures in Autism Research: Evidence from Meta-Analytic Studies, *Journal of Autism and Developmental Disorders*, Vol. 34 (1), pp. 35-40.
- Shattuck, P.T. (2006) The Contribution of Diagnostic Substitution to the Growing Administrative Prevalence of Autism in US Special Education, *Pediatrics*, Vol. 117 (4), pp. 1028-1037.
- Shea, V. (2004) A Perspective on the Research Literature Related to Early Intensive Behavioural Intervention (Lovaas) for Young Children with Autism, *Autism*, Vol. 8 (6), pp. 349-367.
- Sheehy, N. (2001) *Evaluation of TEACCH Methods*, Belfast: Barnardo's Northern Ireland.
- Shimahara, N. (1988) Anthroethnography: A Methodological Consideration. In Sherman, R.R. and Webb, R.B. (eds) *Qualitative Research in Education: Focus and Methods*, London: The Falmer Press, pp. 76-89.
- Shore, S. (2008) *Navigating the Sea of Approaches for Working with Children on the Autism Spectrum*, Accessed online on Sunday October 25<sup>th</sup> 2009 at [http://www.awares.org/conferences/show\\_paper.asp?section=000100010001&conferenceCode=000200100019&id=202&full\\_paper=1](http://www.awares.org/conferences/show_paper.asp?section=000100010001&conferenceCode=000200100019&id=202&full_paper=1)
- Sieber, J. (1992) *Planning Ethically Responsible Research: A Guide for Students and Internal Review Boards*, London: Sage Publications.
- Siegel, L.M. (1998) *The Complete IEP Guide: How to Advocate for Your Special Ed. Child*, Berkeley: Nolo.com Inc.
- Silverman, D. (2000) *Doing Qualitative Research*, London: Sage Publications.
- Simmons, K. (2000) Parents, Legislation and Inclusion. In Daniels, H. (ed.) *Special Education Reformed: Beyond Rhetoric*, London: Falmer Press, pp. 255-267.
- Simpson, R. L. (2004) Finding Effective Intervention and Personnel Preparation Practices for Students with Autistic Spectrum Disorders, *Exceptional Children*, Vol. 70 (20), pp. 135-144.
- Simpson, R.L. (2005) Evidence-Based Practices and Students with Autism Spectrum Disorders, *Focus on Autism and Other Developmental Disabilities*, Vol. 20 (3), pp. 140-149.
- Simpson, R.L., McKee, M., Teeter, D. and Beytien, A. (2007) Evidence-Based Methods for Children and Youth with Autism Spectrum Disorders: Stakeholder Issues and Perspectives, *Exceptionality*, Vol. 15 (4), pp. 203-217.
- Sinnott v. Minister for Education, Ireland and the Attorney General, *Judgement Delivered by Mr. Justice Barr on the 4<sup>th</sup> day of October, 2000.*

- Sinnott v. Minister for Education, Ireland and the Attorney General, *Judgement Delivered by Justices Murphy, Hardiman, Murray, Keane, Geoghegan, Denham and Fennelly on the 12<sup>th</sup> day of July 2001*.
- Skrtic, T.M. (1991) *Behind Special Education: A Critical Analysis of Professional Culture and School Organisation*, Denver: Love Publishing Company.
- Skrtic, T.M. (1999) Learning disabilities as Organisational Pathologies. In Sternberg, R.J. and Spear-Swerling, L. (eds) *Perspectives on Learning Disabilities: Biological, Cognitive and Contextual*, Boulder: Westview Press, pp. 193- 226.
- Smith, A. (2003a) Scientifically Based Research and Evidence-Based Education: A Federal Policy Context, *Research and Practice for Persons with Severe Disabilities*, Vol. 28 (3), pp. 126-132.
- Smith, C. (2001b) Using Social Stories to Enhance Behaviour in Children with Autistic Spectrum Difficulties, *Educational Psychology in Practice*, Vol. 17 (4), pp. 337-345.
- Smith, C. (2003b) *Writing and Developing Social Stories: Practical Interventions in Autism*, Bicester: Speechmark.
- Smith, T. (2001a) Discrete Trial Training in the Treatment of Autism, *Focus on Autism and Other Developmental Disabilities*, Vol. 16 (2), pp. 86-92.
- Smith, T., Eikeseth, S., Klevstrand, M. and Lovaas, O.I. (1997) Intensive Behavioural Treatment for Preschoolers with Severe Mental Retardation and Pervasive Developmental Disorder, *American Journal of Mental Retardation*, Vol. 102, pp. 238-249.
- Snell, M.E. and Brown, M. (2006) *Instruction of Students with Severe Disabilities* (6<sup>th</sup> ed), New Jersey: Prentice Hall.
- Snell, M.E. and Janney, R. (2000) *Collaborative Teaming*, Baltimore: Paul H. Brookes Publishing Co. Inc.
- Söder, M. (1989) Disability as a Social Construct: The Labelling Approach Revisited, *European Journal of Special Needs Education*, Vol. 4 (2), pp. 117-129.
- Sofronoff, K., Leslie, A. and Brown, W. (2004) Parent Management Training and Asperger Syndrome: A Randomised Controlled Trial to Evaluate a Parent Based Intervention, *Autism*, Vol. 8 (3), pp. 301-317.
- South, M., Ozonoff, S. and McMahon, W.M. (2007) The Relationship between Executive Functioning, Central Coherence and Repetitive Behaviours in the High-Functioning Autism Spectrum, *Autism*, Vol. 11 (5), pp. 437-451.

- Southgate, J. (1981) *The Troubled Fish: Barriers to Dialogue*. In Reason, P. and Rowan, J. (eds) *Human Inquiry: A Sourcebook of New Paradigm Research*, New York: Wiley, pp. 53 – 61.
- Special Education Department, St. Patrick's College (2004) *Proposal to the Accreditation Board, Dublin City University, Including Amendments Suggested by the Accreditation Board. Graduate Certificate in the Education of Pupils with Autistic Spectrum Disorders*, Unpublished Document, Dublin: St. Patrick's College.
- Special Education Support Service (2005) *Special Education Support Service Building on Ability, Leadership*, Vol. 26, pp. 10-11.
- Special Education Support Service (SESS) (2009a) *Supports for Teachers of Pupils with Autistic Spectrum Disorders*, Accessed online on Saturday 6<sup>th</sup> June 2009 at [http://www.sess.ie/sess/Files/SESS\\_ASD\\_Supports.pdf](http://www.sess.ie/sess/Files/SESS_ASD_Supports.pdf)
- Special Education Support Service (SESS) (2009b) *SESS Designed and Delivered Courses*, Accessed online on Monday 30<sup>th</sup> November 2009 at <http://www.sess.ie/professional-development/sess-designed-and-delivered-courses/common-primary-and-post-primary/sess-de>
- Special Education Support Service and St. Angela's College, Sligo (2009) *Post-Graduate Certificate/Diploma of Continuing Professional Development in Special Educational Needs (Autistic Spectrum Disorders). Course Booklet 2009-2010*, Sligo: Special Education Support Service and St. Angela's College, Sligo
- Spindler, G. (1982) General Introduction. In Spindler, G. (ed.) *Doing the Ethnography of Schooling: Educational Anthropology in Action*, New York: Holt, Rinehart and Winston, pp. 1-18.
- Spindler, J. and Biott, C. (2000) Target setting in the Induction of Newly Qualified Teachers: Emerging Collegueship in a Context of Performance Management, *Educational Research*, Vol. 42 (3), pp. 275-285.
- Spooner, F. and Browder, D.M. (2003) Scientifically Based Research in Education and Students with Low Incidence Disabilities, *Research and Practice for Persons with Severe Disabilities*, Vol. 28 (3), pp. 117-125.
- Spradley, J. P. (1979) *The Ethnographic Interview*, Orlando: Rinehart and Winston.
- Stake, R.E. (2000) The Case Study Method in Social Inquiry. In Gomm, R., Hammersley, M. and Foster, P. (eds) *Case Study Method*, London: Sage Publications, pp. 19-25.
- Stake, R.E. (2005) Qualitative Case Studies. In Denzin, N.K. and Lincoln, Y.S. (eds) *The Sage Handbook of Qualitative Research* (3<sup>rd</sup> ed), London: Sage Publications.



- Steege, M.W., Mace, C.F., Perry, L. and Longenecker, H. (2007) Applied Behavior Analysis: Beyond Discrete Trial Teaching, *Psychology in Schools*, Vol. 44 (1), pp. 91-99.
- Stephenson, J. (2002) Characterisation of Multisensory Environments: Why Do Teachers Use Them, *Journal of Applied Research in Intellectual Disabilities*, Vol. 15, pp. 73-90.
- Stephens, C.E. (2005) Overcoming Challenges and Identifying a Consensus About Autism Intervention Programming, *The International Journal of Special Education*, Vol. 20 (1), pp. 35-49.
- Stevens, P.J. (2007) *Educational Provision for Children with Mild General Learning Disabilities in National Schools and Special Schools in the Republic of Ireland 1989-2004*, Unpublished Ph.D. Thesis, Dublin: Trinity College, Dublin.
- Strain, P.S. and Cordisco, L.K. (1994) LEAP Preschool. In Harris, S.L. and Handleman, J.S. (eds) *Preschool Education Programs for Children with Autism*, Austin: Pro-ed, pp. 225-244.
- Strauss, A. and Corbin, J. (1998) *Basics of Qualitative Research. Techniques and Procedures for Developing Grounded Theory* (2<sup>nd</sup> ed), Thousand Oaks: Sage Publications.
- Sugrue, C. (1997) *Complexities of Teaching: Child-Centred Perspectives*, London: Falmer Press.
- Sugrue, C. (2004) Rhetorics and Realities of CPD across Europe: From Cacaphony towards Coherence. In Day, C. and Sachs, J. (eds) *International Handbook on the Continuing Professional Development of Teachers*, Maidenhead: Open University Press, pp. 67-93.
- Sugrue, C., Morgan, M., Devine, D. and Raftery, D. (2001) *Policy and Practice of Professional Development for Primary and Post-Primary Teachers in Ireland: A Critical Analysis*. A Report Commissioned by The Research and Development Committee, Department of Education and Science (DES), Dublin: DES.
- Suhrheinrich, J. (2007, 23<sup>rd</sup> January) *Pivotal Response Training, Autism in Educational Settings Programme, Centre for Irish Programmes, Boston College, University of San Diego, California*.
- Swaggart, B. L., Gagnon, E., Bock, S. J., Earles, T. L., Quinn, C., Myles, B.S., and Simpson, R.L. (1995) Using Social Stories to Teach Social and Behavioural Skills to Children with Autism, *Focus on Autistic Behaviour*, Vol. 10, pp. 1-16.
- Symes, M.D., Remington, B., Brown, T. and Hastings, R.P. (2006) Early Intensive Behavioural Intervention for Children with Autism: Therapists' Perspectives on Achieving Procedural Fidelity, *Research in Developmental Disabilities*, Vol. 27 (1), pp. 30-42.

- Tait, C. and Dunlop, A.W. (2005) *The Impact of Training on Practice: Insights from Postgraduate study of Autism. In Inclusive and Supportive Education Congress, Inclusion: Celebrating Diversity, 1<sup>st</sup>–4<sup>th</sup> August 2005, University of Strathclyde, Glasgow: Scotland, electronic resource, CD-ROM, Inclusive Technology ltd.*
- Teacher Education Section (TES), Department of Education and Science (DES) (2004) *Autism In-Career Development Training Courses*, Unpublished Document, Dublin: TES.
- Teacher Education Section (TES), Department of Education and Science (DES) (2007) Special Education Support Service, *Intouch, Issue 89, November 2007*, pp. 36-37.
- Taylor, B. and Taylor, S. (1998) Gary's Story: Parents Doing Intensive Interaction. In Hewett, D. and Nind, M. (eds) *Interaction in Action: Reflections on the Use of Intensive Interaction in Schools*, London: David Fulton Publishers, pp.209-226.
- Tissot, C. and Evans, R. (2003) Visual Strategies for Children with Autism, *Early Child Development and Care*, Vol. 173 (4), pp. 425-433.
- Tod, J. (1999) IEPs: Inclusive Educational Practices, *Support for Learning*, Vol. 14 (4), pp. 184-188.
- Trepagnier, C. (1999) Families with Autism, *Infants and Young Children*, Vol. 12 (2), pp. 37-47.
- Trevarthen, C., Aitken, K., Papoudi, D. and Roberts, J. (1998) *Children with Autism: Diagnosis and Interventions to Meet Their Needs* (2<sup>nd</sup> ed), London: Jessica Kingsley Publishers.
- Troman, G., Jeffrey, B. and Beach, D. (2006) Introduction. In Troman, G., Jeffrey, B. and Beach, D. (eds) *Researching Education Policy: Ethnographic Experiences*, London: Tufnell Press, pp. vii-ix.
- Troman, G. (2006) No Entry Signs: Educational Change and Some Problems Encountered in Negotiating Entry to Educational Settings. In Troman, G., Jeffrey, B. and Beach, D. (eds) *Researching Education Policy: Ethnographic Experiences*, London, Tufnell Press, pp. 1-21.
- Tsang, S.K.M., Shek, D.T.L., Lam, L.L., Tang, F.L.Y. and Cheung, P.M.P. (2007) Brief Report: Application of the TEACCH Program on Chinese Pre-School Children with Autism-Does Culture Make a Difference, *Journal of Autism and Developmental Disorders*, Vol. 37 (2), pp. 390-3.
- Turner, B.A. (1981) Some Practical Aspects of Qualitative Data Analysis: One Way of Organising the Cognitive Processes Associated with the Generation of Grounded Theory, *Quality and Quantity*, Vol. 15, pp. 225-247.

- Turner, B.A. (1994) Patterns of Crisis Behaviour: A Qualitative Inquiry. In Bryman, A. and Burgess, R.G. (eds), *Analyzing Qualitative Data*, London: Routledge, pp. 195-215.
- Turner, M. (1999) Annotation: Repetitive Behaviour in Autism: A Review of Psychological Research, *Journal of Child Psychology and Psychiatry*, Vol. 40 (6), pp. 839-849.
- Tutt, R., Powell, S. and Thornton, M. (2006) Educational Approaches in Autism: What We Know About What We Do, *Educational Psychology in Practice*, Vol. 22 (1), pp. 69-81.
- United Nations (UN) (1948) *The Universal Declaration of Human Rights*, Accessed online on Saturday 29<sup>th</sup> March 2008 at <http://www.un.org/Overview/rights.html>.
- United Nations (UN) (1990) *The United Nations Convention on the Rights of the Child*, Accessed online on Saturday 29<sup>th</sup> March 2008 at <http://www2.ohchr.org/english/law/crc.htm> .
- United Nations (UN) (2008) *The United Nations Convention on the Rights of Persons with Disabilities*, Accessed online on Saturday 9<sup>th</sup> May 2009 at <http://www.un.org/disabilities/documents/convention/convoptprot-e.pdf> .
- United Nations Educational, Scientific and Cultural Organisation (UNESCO) (1994) *The Salamanca Statement and Framework for Action on Special Needs Education: Access and Quality, Salamanca, Spain 7-10 June 1994*, Accessed online on Monday 24<sup>th</sup> March 2008 at [http://www.unesco.org/education/pdf/SALAMA\\_E.PDF](http://www.unesco.org/education/pdf/SALAMA_E.PDF)
- University of Birmingham (2001) *Prospectus*, Birmingham: University of Birmingham.
- Unok Marks, S. (2007) Can “Special” Programs for Children with Autism Spectrum Disorders be Inclusive?, *Research and Practice for Persons with Severe Disabilities*, Vol. 32 (4), pp. 265-268.
- Van Manen, M. (1990) *The Tact of Teaching*, London: Althouse Press.
- Van Oosterom, J. and Devereux, K. (1985) *The Rebus Glossary*, Wisbech: Learning Development Aids.
- VERBI Software (2007) *Max Qualitative Data Analysis (MAXQDA)*, Berlin: Germany.
- Vygotsky, L.S. (1966) Play and its Role in the Mental Development of the Child, *Soviet Psychology*, Vol. 12 (6), pp. 62-76.
- Vygotsky, L.S. (1978) *Mind In Society*, Cambridge, Harvard University Press.

- Wall, A. (2009) *External Influence or Internal Politics – The Perception and Reality of Policy Formulation in Irish Education: How do the Main Actors Perceive that the Policy Leading to the Establishment of the Teaching Council was Derived*, Unpublished Ph.D. Thesis, Belfast: Queen's University.
- Wall, K. (2004) *Autism and Early Years Practice. A Guide for Early Years Professionals, Teachers and Parents*, London: Paul Chapman Publishing.
- Waller, R. (2007) Living my Life, *Special*, January 2007, p. 60.
- Wallis, C. (2006) Inside the Autistic Mind, *Time*, May 29, pp. 44-49.
- Ware, J. (1997) Education, Progress and Pupils with Profound and Multiple Learning Difficulties, *Curriculum*, Vol. 18 (1), pp. 28-36.
- Ware, J. (2001) The Sinnott Judgement: Have We Grasped the Implications, *REACH Journal of Special Needs Education in Ireland*, Vol. 14 (2), pp 75-83.
- Ware, J. (2005) Profound and Multiple Learning Difficulties. In Lewis, A. and Norwich, B. (eds) *Special Teaching for Special Children: Pedagogies for Inclusion*, Maidenhead: Open University Press, pp.67-80.
- Warnock, M. (1982) Children with Special Needs in Ordinary Schools: Integration Revisited, *Education Today*, Vol. 32 (3), pp. 56-62.
- Watson, J. (1995) *Staff Training Needs Associated with Autistic Pupils in Scotland*, Unpublished Report, Edinburgh: Moray House Institute of Education.
- Webb, T. (2000) Can Children with Autism and Severe Learning Difficulties be Taught to Communicate Spontaneously and Effectively Using the Picture Exchange Communication System?, *Good Autism Practice*, Vol. 1 (1), pp 29-42.
- Webb, E.J., Campbell, D.T., Schwartz, R.D. and Sechrest, L. (1966) *Unobtrusive Measures: Nonreactive Research in the Social Sciences*, Chicago: Rand McNally.
- Webb, W. (1999) *When Your Beautiful Child's Not Normal*, Norwich: Wendy Webb Books.
- Weisz, J.R. and Hawley, K.M. (1998) Finding, Evaluating, Refining and Applying Empirically Supported Treatments for Children and Adolescents, *Journal of Clinical Psychology*, Vol. 27 (2), pp. 206-216.
- Welsh, M. and Pennington, B.F. (1988) Assessing Frontal Lobe Functioning in Children: Views from Developmental Psychology, *Developmental Neuropsychology*, Vol. 4 (3), pp. 199-230.
- Welton, L. (2004) *What Did You Say? What Did You Mean?.*, London: Jessica Kingsley Publishers.

- Whitaker, P. (1994) Mainstream Students Talk About Integration, *British Journal of Special Education*, Vol. 21(1), pp. 13-16.
- Whitaker, P., Barratt, P., Joy, H., Potter, M. and Thomas, G. (1998) Children with Autism and Peer Group Support: Using "Circles of Friends", *British Journal of Special Education*, Vol. 25 (2), pp. 60-64.
- White, A. and Worth, S. (2006) Don't Tell Me, Show Me. Literacy Issues and the Need for Visual Support in Autistic Spectrum Disorder, *Good Autism Practice*, Vol. 7 (1), pp. 45-53.
- White, W.F. (1995) The Search for the Truth About "Good Teaching", *Education*, Vol. 116 (1), pp. 70-73.
- Wienke, W.D., Pearl, C.E. and Wienke, C.L. (2005) *Project ASD: Preparing Diverse Special Educators to Work with Students with Autism Spectrum Disorders*, Florida: University of Central Florida.
- Willey, L.H. (1999) *Pretending to be Normal*, London: Jessica Kingsley Publishers.
- Williams, D. (1993) *Nobody Nowhere*, London: Corgi Books.
- Williams, D. (2006b) *The Jumbled Jigsaw*, London: Jessica Kingsley.
- Williams, J. (2006a, November 22<sup>nd</sup>) Bernard Rimland, Psychologist, Ended the Dark Days of Autism, *The San Diego Union-Tribune*, p. B-5.
- Williams, J. and Hanke, D. (2007) Do You Know What Sort of School I Want, *Good Autism Practice Journal*, Vol. 8 (2), pp. 51-64.
- Wimpory, D., Chadwick, P. and Nash, S. (1995) Brief Report: Musical Interaction Therapy for Children with Autism: An Evaluative Case Study with Two Year Follow Up, *Journal of Autism and Developmental Disorders*, Vol. 25 (5), pp 541-552.
- Wing, L. (1981) Asperger Syndrome: A Clinical Account, *Journal of Psychological Medicine*, Vol. 11, pp. 115-129.
- Wing, L. (1991) The Relationship Between Asperger's Syndrome and Kanner's Autism. In Frith, U. (ed.) *Autism and Asperger Syndrome*, Cambridge: Cambridge University Press, pp. 93-121
- Wing, L. (1996) *The Autistic Spectrum: A Guide for Parents and Professionals*, London: Constable.
- Wing, L. (2008) *The History of Ideas on Autism: Legends, Myths and Reality*, Accessed online on Sunday October 25<sup>th</sup> 2009 at [http://www.awares.org/conferences/show\\_paper.asp?section=000100010001&conferenceCode=000200040001&id=18&full\\_paper=1](http://www.awares.org/conferences/show_paper.asp?section=000100010001&conferenceCode=000200040001&id=18&full_paper=1)

- Wing, L. and Gould, J. (1979) Severe Impairments of Social Interaction and Associated Abnormalities in Children: Epidemiology and Classification, *Journal of Autism and Childhood Schizophrenia*, Vol. 9, pp. 11-29.
- Winter, R. (1982) Dilemma Analysis: A Contribution to Methodology for Action Research, *Cambridge Journal of Education*, Vol. 3 (12), pp. 161-174.
- Wolcott, H.F. (1982) Mirrors, Models, and Monitors: Educator Adaptations of the Ethnographic Innovation. In Spindler, G. (ed.) *Doing the Ethnography of Schooling: Educational Anthropology in Action*, New York: Holt, Rinehart and Winston, pp. 68-95.
- Woods, P. (1992) Symbolic Interactionism: Theory and Method. In LeCompte. M., Millroy, W.L. and Pressle, J. (eds) *The Handbook of Qualitative Research in Education*, London: Academic Press Ltd., pp. 337-404.
- Woods, P. (1996) *Inside Schools. Ethnography in Educational Research*, London: Routledge.
- World Health Organisation (WHO) (1994) *The International Statistical Classification of Diseases and Related Health Problems, Tenth Revision (ICD-10)*, Geneva: WHO.
- Wragg, E.C. (1999) *An Introduction to Classroom Observation* (2<sup>nd</sup> ed), London: Routledge.
- Yell, M.L. and Drasgow, E. (2000) Litigating for a Free Appropriate Public Education: The Lovaas Hearings and Cases, *The Journal of Special Education*, Vol. 33 (4), pp. 205-214.
- Yin, R. K. (2003) *Case Study Research: Design and Methods* (3<sup>rd</sup> ed), London: Sage.
- Yoder, P. and Stone, W.L. (2006) A Randomized Comparison of the Effect of Two Prelinguistic Communication Interventions on the Acquisition of Spoken Communication in Preschoolers with ASD, *Journal of Speech, Language and Hearing Research*, Vol. 49 (4), pp. 698-711.
- Yoon, K.S., Duncan, T., Lee, S.W.-Y., Scarloss, B. and Shapley, K. (2007) *Reviewing the Evidence on How Teacher Professional Development Affects Student Achievement (Issues and Answers Report, REL 2007-No. 033)*, Washington, U.S. Department of Education, Institute of Education Sciences, National Center for Education Evaluation and Regional Assistance, Regional Educational Laboratory Southwest, Accessed online on Thursday July 30<sup>th</sup> 2009 at <http://ies.ed.gov/ncee/edlabs/regions/southwest/pdf/REL2007033.pdf>
- Ysseldyke, J. (1996) Improving Teaching and Learning: A Thermos Bottle Keeps Things Hot and Cold, but Does it Know, *British Journal of Special Education*, Vol. 23 (1), pp.3-8.

## APPENDICES

### Appendix A

#### Classification Systems for Autistic Spectrum Disorders

**Source:** Government of Ireland, Department of Education and Science (DES) (2001) *Educational Provision and Support for Persons with Autistic Spectrum Disorders: The Report of the Task Force on Autism*, Dublin: The Stationery Office.

#### **The International Statistical Classification of Diseases and Related Health Problems, Tenth Revision, 1993 (ICD-10)**

ICD-10, the code F84 represents pervasive developmental disorders, which are allocated codes and associated definitions as follows:

##### **F84.0 Childhood Autism**

- A. Abnormal or impaired development is evident before the age of 3 years in at least one of the following areas:
  - (1) receptive or expressive language used in social communication;
  - (2) the development of selective social attachments or of reciprocal social interaction;
  - (3) functional or symbolic play.
- B. A total of at least six symptoms from (1), (2) and (3) must be present, with at least two from (1) and at least one from each of (2) and (3);
  - (1) Qualitative impairments in reciprocal social interaction, as manifested by at least two of the following areas:
    - (a) failure adequately to use eye-to-eye gaze, facial expression, body posture and gesture to regulate social interaction;
    - (b) failure to develop (in a manner appropriate to mental age, and despite ample opportunities) peer relationships that involve a mutual sharing of interests, activities and emotions;
    - (c) lack of socio-emotional reciprocity as shown by an impaired or deviant response to other people's emotions, or lack of modulation of behaviour according to social context; or a weak integration of social, emotional, and communicative behaviours;
    - (d) lack of spontaneous seeking to share enjoyment, interests, or achievements with other people (e.g. a lack of showing, bring or pointing out to other people objects of interest to the individual).
  - (2) Qualitative impairments in communication, as manifested by at least one of the following:
    - (a) A delay in, or total lack of development of spoken language that is not accompanied by an attempt to compensate by the use of gesture or mime as an alternative mode of communication (often preceded by a lack of communicative babbling);
    - (b) relative failure to initiate or sustain conversational interchange (at whatever level of language skills is present), in which there is reciprocal responsiveness to the communication of the other person;
    - (c) stereotyped and repetitive use of language or idiosyncratic use of words or phrases;

- (d) lack of varied spontaneous make believe or (when younger) social imitative play.
- (3) Restricted, repetitive and stereotyped patterns of behaviour, interests and activities, as manifested by at least one of the following areas:
  - (a) an encompassing preoccupation with stereotyped patterns of interest that are abnormal in content or focus; or in one or more interests that are abnormal in their intensity and circumscribed nature though not in their content or focus;
  - (b) apparently compulsive adherence to specific, non-functional routines or rituals;
  - (c) stereotyped and repetitive motor mannerisms that involve either hand or finger flapping or twisting, or complex whole body movements;
  - (d) preoccupation with part-objects or non-functional elements of play materials (such as their odour, the feel of their surface, or the noise or vibration that they generate).
- (4) The clinical picture is not attributable to other varieties of pervasive developmental disorder: specific developmental disorder of receptive language (F80.2) with secondary socio-emotional problems; reactive attachment disorder (F94.1) or disinhibited attachment disorder (F94.2); mental retardation (F70-F72) with some associated emotional or behavioural disorder: schizophrenia (F20. -) of unusually early onset; and Rett's syndrome (F84.2).

#### **F84.1 Atypical Autism**

- A. Abnormal or Impaired development is evident at or after the age of 3 years (criteria as for autism except for age of manifestation).
- B. There are qualitative abnormalities in reciprocal social interaction or in communication, or restricted repetitive, and stereotyped patterns of behaviour, interests and activities. (Criteria as for autism except that it is unnecessary to meet the criteria for number of areas of abnormality).
- C. The disorder does not meet the diagnostic criteria for autism (F84.0)

#### **F84.5 Asperger's Syndrome**

- C. There is no clinically significant general delay in spoken or receptive language or cognitive development. Diagnosis requires that single words should have developed by 2 years of age or earlier and that communicative phrases be used by three years of age or earlier. Self-help skills, adaptive behaviour, and curiosity about the environment during the first 3 years should be at a level consistent with normal intellectual development. However motor milestones may be somewhat delayed and motor clumsiness is usual (although not a necessary diagnostic feature). Isolated special skills, often related to abnormal preoccupations, are common, but not required for diagnosis.
- D. There are qualitative abnormalities in reciprocal social interaction (criteria for autism).
- E. The individual exhibits unusually, intense, circumscribed interest or restricted, repetitive, and stereotyped patterns of behaviour, interests, and activities (criteria as for autism; however, it would be less usual for these to include either motor mannerisms or preoccupations with part-objects or non-functional elements of play materials).
- F. The disorder is not attributable to the other varieties of pervasive developmental disorder; simple schizophrenia (F20.6); schizophrenia disorder (F21); obsessive



compulsive disorder (f42.-); anankastic personality disorder (F60.5); reactive and disinhibited attachment disorders of childhood (f91.4 and F94.2, respectively)

#### **F84.9 Pervasive Developmental Disorder, Unspecified**

This is a residual diagnostic category that should be used for disorders which fit the general description for pervasive developmental disorders but in which contradictory findings or a lack of adequate information means that the criteria for any of the other F84 codes cannot be met.

### **Diagnostic and Statistical Manual of Mental Disorders, American Psychiatric Association, Fourth Edition, Text Revision (2000)**

#### **299.00 Autistic Disorder**

- A. A total of six (or more) items from (1), (2) and (3), with at least two from (1), and one each from (2) and (3):
- (1) qualitative impairment in social interaction, as manifested by at least two of the following:
    - (a) marked impairment in the use of multiple nonverbal behaviours such as eye-to-eye gaze, facial expression, body postures, and gestures to regulate social interaction;
    - (b) failure to develop peer relationships appropriate to developmental level;
    - (c) a lack of spontaneous seeking to share enjoyment, interests, or achievements with other people (e.g. by a lack of showing, bringing, or pointing out objects of interest);
    - (d) lack of social or emotional reciprocity.
  - (2) qualitative impairment in communication, as manifested by at least one of the following:
    - (a) delay in, or total lack of, the development of spoken language (not accompanied by an attempt to compensate through alternative modes of communication such as gestures or mime);
    - (b) in individuals with adequate speech, marked impairment in the ability to initiate or sustain a conversation with others;
    - (c) stereotyped and repetitive use of language or idiosyncratic language;
    - (d) lack of varied, spontaneous make-believe play or social imitative play appropriate to developmental level.
  - (3) restricted repetitive and stereotyped patterns of behaviour, interests, and activities, as manifested by at least one of the following:
    - (a) encompassing preoccupation with one or more stereotyped patterns of interest that is abnormal either in intensity or focus;
    - (b) apparently inflexible adherence to specific, non-functional routines or rituals;
    - (c) stereotyped and repetitive motor mannerisms (e.g. hand or finger flapping or twisting or complex whole-body movements);
    - (d) persistent preoccupation with parts of objects.
- B. Delays or abnormal functioning in at least one of the following areas, with onset prior to age 3 years:
- (1) social interaction,
  - (2) language as used in social communication, or
  - (3) symbolic or imaginative play.
- C. The disturbance is not better accounted for by Rett's Disorder or Childhood Disintegrative Disorder.

### **299.80 Asperger's Disorder**

- A. Qualitative impairment in social interaction, as manifested by at least two of the following:
  - (1) marked impairment in the use of multiple nonverbal behaviours such as eye-to-eye gaze, facial expression, body postures, and gestures to regulate social interaction;
  - (2) failure to develop peer relationships appropriate to developmental level;
  - (3) a lack of spontaneous seeking to share enjoyment, interests, or achievements with other people (e.g. by a lack of showing, bringing, or pointing out objects of interest to other people);
  - (4) lack of social or emotional reciprocity.
- B. Restricted repetitive and stereotyped patterns of behaviour, interests, and activities, as manifested by at least one of the following:
  - (1) encompassing preoccupation with one or more stereotyped and restricted patterns of interest that is abnormal either in intensity or focus;
  - (2) apparently inflexible adherence to specific, non-functional routines or rituals;
  - (3) stereotyped and repetitive motor mannerisms (e.g. hand or finger flapping or twisting or complex whole-body movements);
  - (4) persistent preoccupation with parts of objects.
- C. The disturbance causes clinically significant impairments in social, occupational, or other important areas of functioning.
- D. There is no clinically significant general delay in language (e.g. single words used by age 2 years, communicative phrases used by age 3 years).
- E. There is no clinically significant delay in cognitive development or in the development of age appropriate self-help skills, adaptive behaviour (other than in social interaction), and curiosity about the environment in childhood.
- F. Criteria are not met for another specific Pervasive Developmental Disorder or Schizophrenia.

### **299.80 Pervasive Developmental Disorder – Not Otherwise Specified (Including Atypical Autism) (PDD-NOS)**

This category should be used when there is a severe and pervasive impairment in the development of reciprocal social interaction or verbal and nonverbal communication skills, or when stereotyped behaviour, interests and activities are present, but the criteria are not met for a specific Pervasive Developmental Disorder, Schizophrenia, Schizotypal Personality Disorder, or Avoidant Personality Disorder. For example, this category includes atypical autism – presentations that do not meet the criteria for Autistic Disorder because of late age of onset, atypical symptomatology, or subthreshold symptomatology, or all of these.

## Appendix B

### Paintings by Jessica Park

Source: Accessed online Tuesday April 3<sup>rd</sup> 2007 at  
<http://www.jessicapark.com/flatiron.html>



#### Description:

"This is the Flatiron Building from the view of the 30th floor of the building across. I put a rainbow called the rosy light instead of other buildings and streets. If you look through the windows, you can see the pinkish lightning. Also the window panes make the sky a little redder, if you look through. The lightning started off thick at the top window. Then it divided and thinned at the big window. There is one lightning at the bottom window of the picture. One of the top windows has the shade halfway down, and one of them has the shade down a bit. The lower part of the big windows has the Venetian blinds a part way down. One of the three windows has the blind down open and two have the blind down closed. The yellows on the bottom windows are slightly different from the upper windows. On the left of the big window is the woman's face, and on the right is the man's face. Above right from the male face, you can see a little sculpture like thing".



#### Description:

"This is the southeast lighthouse in Block Island which was built in 1873. The iridescent rainbow altocumulus lenticularis below Ursa Minor are nacreous clouds. Notice the purple sky through the lighthouse window is bluer, because of the panes. The light to the left is primrose yellow with lime lines. The mountings around the light are phthalo blue. The two rails are black. The base below the light is magenta. Part of the bracket is blue. The window panes in the house and the ring on the bracket finial are French ultramarine blue. The part to the right of the moulding is



#### Description:

"These windows are in Aunt Adrienne's house in Brooklyn. The doors slide open and close. There's a shadow on the right-hand panel. The doors open on three hinges. The floor that is the closest is made of wood. I made it brick red instead of brown just to make it interesting. The floor that is behind it is made of slate tile. The fence was a neutral colour, but I made it pink with light magenta lines. The tree is in the yard. The sun is peeking out from behind the tree. The sun was setting when I started to sketch this. I went to Aunt Adrienne's house with my parents in June, and

**Appendix C**  
**How I Got to Keep Listening**

**Source:** Aston, P. (2006) How I Got to Keep Listening,  
*Good Autism Practice*, Vol. 7 (1), p.43.

I got to keep listening  
But I keep missing the words  
Maybe I could sit at the front of the carpet  
That will be a little bit louder

Mrs. Hirst talks to me  
And I got to think  
I thought "it's hard"  
But Mrs. Hirst thinks it's easy.

Maybe I only got small ears  
And I got to keep them on  
That's how  
I got to keep listening.

Philip Aston

**Appendix D**  
**Data-Collection Instruments**  
**Classroom Observation Schedules**

<b>Teacher:</b>
<b>School:</b>
<b>Date:</b>
<b>Time:</b>

	<b>1. Understanding, Knowledge and Skills</b>	<b>Observation</b>					
<b>1.1</b>	<p>Pupils with autistic spectrum disorders are accommodated in relation to the <b>physical layout, organisation and environmental stimuli</b> of the classroom.</p> <table border="1" style="width: 100%; border-collapse: collapse; margin-top: 5px;"> <tr> <td style="text-align: center;">1</td> <td style="text-align: center;">2</td> <td style="text-align: center;">3</td> <td style="text-align: center;">4</td> <td style="text-align: center;">5</td> </tr> </table>	1	2	3	4	5	<p>A bright, cheerful and well-organised classroom is created with clearly designated areas for individual and group work. Visual schedules are used effectively by pupils and a low-stimulus physical classroom environment is created. Teaching resources are stored in an organised and accessible manner. Table mats are used to indicate change of purpose of group area at lunch-time. Confusion is created however by the dual purpose of an adjoining room as a “time out” area following an inappropriate behaviour and an area where pupils are provided with opportunities to engage in enjoyable activities.</p>
1	2	3	4	5			
<b>1.2</b>	<p><b>Predictability, structure and routine</b> are considered in the implementation of the curriculum.</p> <table border="1" style="width: 100%; border-collapse: collapse; margin-top: 5px;"> <tr> <td style="text-align: center;">1</td> <td style="text-align: center;">2</td> <td style="text-align: center;">3</td> <td style="text-align: center;">4</td> <td style="text-align: center;">5</td> </tr> </table>	1	2	3	4	5	<p>Pupils demonstrate an awareness and understanding of sequence of school day and manipulate visual schedules effectively. Pupils are informed with regard to transitions between lesson, tasks to be completed and recess periods.</p>
1	2	3	4	5			
<b>1.3</b>	<p>An awareness of the <b>social deficits of the triad of impairments</b> permeates learning and teaching activities.</p> <table border="1" style="width: 100%; border-collapse: collapse; margin-top: 5px;"> <tr> <td style="text-align: center;">1</td> <td style="text-align: center;">2</td> <td style="text-align: center;">3</td> <td style="text-align: center;">4</td> <td style="text-align: center;">5</td> </tr> </table>	1	2	3	4	5	<p>Social skills are taught directly and informally during the school day. Turn-taking and awareness of each other are developed through curricular-linked games. Pupils are encouraged and supported to interact with adults in the classroom in a socially-appropriate manner. There is scope to create deliberate opportunities to increase pupils’ awareness of each other and mitigate the social deficits of the triad of impairments experienced by pupils.</p>
1	2	3	4	5			

1.4	<p>An awareness of the <b>communication</b> deficits of the <b>triad of impairments</b> permeates learning and teaching activities.</p> <table border="1"> <tr> <td>1</td> <td>2</td> <td>3</td> <td>4</td> <td>5</td> </tr> </table>	1	2	3	4	5	<p>Teacher demonstrates an awareness of the communication deficits of the triad of impairments and promotes communication through the modelling of correct responses, use of visual schedules and resources with a high visual content. Greater attention could be directed towards reducing the use of language thereby assisting pupils' understanding.</p>
1	2	3	4	5			
1.5	<p>An awareness of the deficit of the <b>triad of impairments</b> associated with <b>rigidity of thought and behaviour</b> permeates learning and teaching activities.</p> <table border="1"> <tr> <td>1</td> <td>2</td> <td>3</td> <td>4</td> <td>5</td> </tr> </table>	1	2	3	4	5	<p>Pupils are provided with opportunities to turn-take and use resources interchangeably. All pupils are provided with a range of tasks. Activities are deliberately selected to ensure pupils are responsive and motivated. However there is a need to redirect pupils' attention or avoid activities where there is a risk that this deficit may interfere with the pupils' access to learning and teaching opportunities. Strategies employed do not always succeed in refocusing pupils' attention.</p>
1	2	3	4	5			
1.6	<p>A <b>range of teaching approaches</b> and <b>strategies</b> is used to meet the group and individual needs of pupils.</p> <table border="1"> <tr> <td>1</td> <td>2</td> <td>3</td> <td>4</td> <td>5</td> </tr> </table>	1	2	3	4	5	<p>Elements of TEACCH, teacher-modelling, differentiated scaffolding of individual pupils' responses, pupils' strengths as visual learners utilised, visual schedules, token economies, behavioural principles, incidental teaching, activity learning, constructivist learning through posing structured questions and talk and discussion are variously used to meet group and individual needs.</p>
1	2	3	4	5			
1.7	<p><b>Teaching approaches</b> and <b>strategies</b> consider the <b>visual learning modality</b> of pupils with autistic spectrum disorders.</p> <table border="1"> <tr> <td>1</td> <td>2</td> <td>3</td> <td>4</td> <td>5</td> </tr> </table>	1	2	3	4	5	<p>The visual learning modality of pupils with autistic spectrum disorders is considered through the use of differentiated worksheets with a high visual component, resources that are visually attractive and visual schedules.</p>
1	2	3	4	5			
1.8	<p>Pupils are provided with opportunities to engage in <b>individual work</b> and <b>group work</b> .</p> <table border="1"> <tr> <td>1</td> <td>2</td> <td>3</td> <td>4</td> <td>5</td> </tr> </table>	1	2	3	4	5	<p>Cognisant of the need to develop independent work practices and also of the value of group activities. Activities are suitably varied throughout the observation period.</p>
1	2	3	4	5			
1.9	<p>Pupils are <b>actively</b> and <b>meaningfully engaged</b> in learning activities</p> <table border="1"> <tr> <td>1</td> <td>2</td> <td>3</td> <td>4</td> <td>5</td> </tr> </table>	1	2	3	4	5	<p>Activities are appropriately stimulating and interesting and generally succeed in maintaining pupils' interest and engaging their attention. Support staff monitor pupils' on-task engagement.</p>
1	2	3	4	5			

1.10	<b>Independent learning</b> is promoted. <table border="1"> <tr> <td>1</td> <td>2</td> <td>3</td> <td>4</td> <td>5</td> </tr> </table>	1	2	3	4	5	Independent learning is part of pupils' learning programme and the environment is specifically manipulated to provide for independent learning.
1	2	3	4	5			
1.11	<b>Strategies</b> for the management of pupils' <b>behaviour</b> consider the implications of the <b>triad of impairments</b> . <table border="1"> <tr> <td>1</td> <td>2</td> <td>3</td> <td>4</td> <td>5</td> </tr> </table>	1	2	3	4	5	Behaviour is managed through the use of clear visual and verbal instructions and the provision of a highly structured and predictable classroom environment. However, inappropriate behaviour could be dealt with better through redirecting or refocusing pupils' attention and avoiding tasks that may lead to inappropriate behaviours.
1	2	3	4	5			
1.12	<b>Strategies</b> for the management of pupils' <b>behaviour</b> consider the implications of the <b>sensory and perceptual sensitivities</b> of pupils. <table border="1"> <tr> <td>1</td> <td>2</td> <td>3</td> <td>4</td> <td>5</td> </tr> </table>	1	2	3	4	5	The teacher is aware of the sensory and perceptual sensitivities of pupils with autistic spectrum disorders and creates a low-stimulus and predictable classroom environment. However the volume of instructional language could be reduced and pupils' inappropriate behaviour accompanied by loud vocalising needs to be addressed.
1	2	3	4	5			
1.13	<b>Strategies</b> for the management of pupils' <b>behaviour</b> consider the implications of the <b>poor organisational skills</b> of pupils. <table border="1"> <tr> <td>1</td> <td>2</td> <td>3</td> <td>4</td> <td>5</td> </tr> </table>	1	2	3	4	5	The classroom environment is specifically structured in order to link particular activities to classroom areas. Group-work takes place in a designated area, lunch-time is characterised by covering the table with personalised table mats and individual areas are clearly delineated.
1	2	3	4	5			
1.14	<b>Strategies</b> for the management of pupils' <b>behaviour</b> consider the <b>visual learning modality</b> of pupils.. <table border="1"> <tr> <td>1</td> <td>2</td> <td>3</td> <td>4</td> <td>5</td> </tr> </table>	1	2	3	4	5	Visual schedules and prompts are used effectively to assist pupils in managing their own behaviour.
1	2	3	4	5			

1.15	<b>Pupils' behaviour in effectively managed.</b> <table border="1"> <tr> <td>1</td> <td>2</td> <td>3</td> <td>4</td> <td>5</td> </tr> </table>	1	2	3	4	5	The use of visual schedules, clear transitions between lessons, meaningful learning activities, a variety of teaching methodologies such as elements of incidental teaching, activity learning, constructivist learning, teacher-modelling, positive reinforcement of approximations of correct responses and developing language through the use of song and rhyme assist in the management of pupils' behaviour. However greater attention needs to be directed towards reducing the volume of instructional language, redirecting and refocusing pupils' inappropriate behaviour and employing clear and consistent behaviour strategies.
1	2	3	4	5			
1.16	<b>A wide range of appropriate learning and teaching resources including Information and Communication Technology is available and is used appropriately.</b> <table border="1"> <tr> <td>1</td> <td>2</td> <td>3</td> <td>4</td> <td>5</td> </tr> </table>	1	2	3	4	5	A wide range of attractive and motivating learning and teaching resources is used effectively. ICT is not used widely in the implementation of learning and teaching.
1	2	3	4	5			
1.17	<b>Special Needs Assistant-support is effectively managed.</b> <table border="1"> <tr> <td>1</td> <td>2</td> <td>3</td> <td>4</td> <td>5</td> </tr> </table>	1	2	3	4	5	Special Needs Assistant-Support is managed effectively and pupils are facilitated in engaging in tasks independently with assistance being given only when necessary.
1	2	3	4	5			

<b>2. Curriculum</b>		<b>Observation</b>					
2.1	<b>Pupils with ASD have access to the primary school curriculum.</b> <table border="1"> <tr> <td>1</td> <td>2</td> <td>3</td> <td>4</td> <td>5</td> </tr> </table>	1	2	3	4	5	Evidence of access to English, Social Personal and Health Education and Mathematics Curriculum.
1	2	3	4	5			
2.2	<b>The teacher displays a secure knowledge and understanding of curriculum content.</b> <table border="1"> <tr> <td>1</td> <td>2</td> <td>3</td> <td>4</td> <td>5</td> </tr> </table>	1	2	3	4	5	The teacher displays a secure knowledge and understanding of the Primary School Curriculum.
1	2	3	4	5			



2.3	<p>The <b>curriculum</b> content is <b>matched</b> to pupils' learning needs and capacities</p> <table border="1"> <tr> <td>1</td> <td>2</td> <td>3</td> <td>4</td> <td>5</td> </tr> </table>	1	2	3	4	5	Clear and effective matching of curriculum to pupils' learning needs and capacities.
1	2	3	4	5			
2.4	<p>The <b>curriculum</b> provides a range of <b>opportunities</b> to develop <b>communication</b> skills.</p> <table border="1"> <tr> <td>1</td> <td>2</td> <td>3</td> <td>4</td> <td>5</td> </tr> </table>	1	2	3	4	5	All possibilities for developing communication skills are utilised. Snack time is used to develop pupils' awareness of each other.
1	2	3	4	5			
2.5	<p>The <b>curriculum</b> provides a range of <b>opportunities</b> to develop <b>social</b> skills.</p> <table border="1"> <tr> <td>1</td> <td>2</td> <td>3</td> <td>4</td> <td>5</td> </tr> </table>	1	2	3	4	5	While awareness of each other is consistently fostered and encouraged, attention could be directed towards providing specific opportunities for pupils to interact with each other.
1	2	3	4	5			
2.6	<p>The <b>curriculum</b> provides a range of <b>opportunities</b> to develop <b>play and imaginative</b> skills</p> <table border="1"> <tr> <td>1</td> <td>2</td> <td>3</td> <td>4</td> <td>5</td> </tr> </table>	1	2	3	4	5	Opportunities are provided for pupils to play – the use of activity learning and attractive resources develop pupils' play and imagination skills.
1	2	3	4	5			
2.7	<p>The <b>interests</b> of pupils are <b>linked appropriately</b> to curriculum content.</p> <table border="1"> <tr> <td>1</td> <td>2</td> <td>3</td> <td>4</td> <td>5</td> </tr> </table>	1	2	3	4	5	Pupils' interests are sometimes considered – however opportunities to further explore pupils' expressed interests are not sufficiently utilised e.g. question re. anatomy. Pupils' lunch is used to stimulate discussion with regard to food and nutrition and personalised placemats are used to indicate pupils' places at the table.
1	2	3	4	5			

### ***Comment/Summary Statement:***

- A bright, cheerful and well-organised classroom is created with clearly designated areas for individual and group work. Visual schedules are used effectively by pupils and a low-stimulus physical classroom environment is created. Pupils demonstrate awareness and understanding of the sequence of the school day and manipulate visual schedules effectively. Social skills were taught directly and informally during the observation period. Turn-taking and awareness of each other is developed through curricular-linked games. There is scope to create deliberate opportunities to increase pupils' awareness of each other and mitigate the social deficits of the triad of impairments experienced by pupils.
- Teacher demonstrates an awareness of the communication deficits of the triad of impairments. Greater attention could be directed towards reducing the use of language thereby assisting pupils' understanding.
- All pupils are provided with a range of tasks. Activities are deliberately selected to ensure pupils are responsive and motivated. However there is a need to redirect pupils' attention or avoid activities where there is a risk that this deficit may interfere with the pupil's access to learning and teaching opportunities. Strategies employed do not always succeed in refocusing pupils' attention.
- A variety of teaching approaches is used in the implementation of learning and teaching.
- The visual learning modality of pupils with ASD is considered through the use of differentiated worksheets with a high visual component, resources that are visually attractive and visual schedules.
- Cognisant of the need to develop independent work practices and also of the value of group activities. Activities are suitably varied throughout the school day.
- Behaviour is managed through the use of clear visual and verbal instructions and the provision of a highly structured and predictable classroom environment. However inappropriate behaviour could be dealt with better through redirecting or refocusing pupils' attention and avoiding tasks that may lead to inappropriate behaviours.
- A wide range of attractive and motivating learning and teaching resources is used effectively. ICT is not used widely in the implementation of learning and teaching.
- It is apparent that a cohesive whole-staff approach is often used - however greater inclusion of pupils in mainstream classes could be considered as could reverse-inclusion. It was reported that parents are encouraged to become actively involved in pupils' learning and teaching. Special Needs Assistant-support is managed effectively and pupils are facilitated in engaging in tasks independently with assistance being given only when necessary.
- Evidence of access to English, Social Personal and Health Education and Mathematics Curriculum.
- Pupils' interests are sometimes considered – however opportunities to further explore pupils' expressed interests are not sufficiently utilised e.g. anatomy question posed by pupil could have been followed up.

<i>Summary of Ratings for Classroom Observation Schedule</i>						
		<b>Understanding, Knowledge and Skills</b>				
Pupils with autistic specific disorders are accommodated in relation to the <b>physical layout, organisation and environmental stimuli</b> of the classroom	1.1	1	2	3	4	5
<b>Predictability, structure and routine</b> are considered in the implementation of the curriculum.	1.2	1	2	3	4	5
An awareness of the <b>social</b> deficits of the <b>triad of impairments</b> permeates learning and teaching activities.	1.3	1	2	3	4	5
An awareness of the <b>communication</b> deficits of the <b>triad of impairments</b> permeates learning and teaching activities.	1.4	1	2	3	4	5
An awareness of the deficit of the <b>triad of impairments</b> associated with <b>rigidity of thought and behaviour</b> permeates learning and teaching activities.	1.5	1	2	3	4	5
A <b>range of teaching approaches and strategies</b> is used to meet the group and individual needs of pupils.	1.6	1	2	3	4	5
<b>Teaching approaches and strategies</b> consider the <b>visual learning modality</b> of pupils with autistic spectrum disorders.	1.7	1	2	3	4	5
Pupils are provided with opportunities to engage in <b>individual work and group work</b> .	1.8	1	2	3	4	5
Pupils are <b>actively and meaningfully engaged</b> in learning activities.	1.9	1	2	3	4	5
<b>Independent learning</b> is promoted.	1.10	1	2	3	4	5
<b>Strategies</b> for the management of pupil s' <b>behaviour</b> consider the implications of the <b>triad of impairments</b> .	1.11	1	2	3	4	5
<b>Strategies</b> for the management of pupils' <b>behaviour</b> consider the implications of the <b>sensory and perceptual sensitivities</b> of pupils.	1.12	1	2	3	4	5
<b>Strategies</b> for the management of pupil s' <b>behaviour</b> consider the implications of the <b>poor organisational skills</b> of pupils.	1.13	1	2	3	4	5
<b>Strategies</b> for the management of pupil s' <b>behaviour</b> consider the <b>visual learning modality</b> of pupils.	1.14	1	2	3	4	5
Pupils' <b>behaviour</b> in <b>effectively managed</b> .	1.15	1	2	3	4	5
A <b>wide range of appropriate</b> learning and teaching <b>resources including Information and Communication Technology</b> is available and is used appropriately.	1.16	1	2	3	4	5
<b>Special Needs Assistant</b> support is effectively managed.	1.17	1	2	3	4	5
		<b>Curriculum</b>				
Pupils with ASD have access to the <b>primary school curriculum</b> .	2.1	1	2	3	4	5
The teacher display a secure <b>knowledge and understanding of curriculum</b> content.	2.2	1	2	3	4	5
The <b>curriculum</b> content is <b>matched</b> to pupils' learning needs and capacities.	2.3	1	2	3	4	5
The <b>curriculum</b> provides a range of <b>opportunities</b> to develop <b>communication</b> skills.	2.4	1	2	3	4	5
The <b>curriculum</b> provides a range of <b>opportunities</b> to develop <b>social</b> skills.	2.5	1	2	3	4	5
The <b>curriculum</b> provides a range of <b>opportunities</b> to develop <b>play and imaginative</b> skills.	2.6	1	2	3	4	5
The <b>interests</b> of pupils are <b>linked appropriately</b> to curriculum content.	2.7	1	2	3	4	5

## Appendix D

### Class Teachers' Semi-Structured Interview Schedule

Class Teachers' Semi-Structured Interview Schedule
<b>Genesis of Decision to Teach Children with Autistic Spectrum Disorders</b>
What prompted you to become involved in the area of special education? Do you think that teaching children with autistic spectrum disorders is very different from teaching children who do not have autistic spectrum disorders?
<b>Initial Teacher Education and Inservice Education</b>
Were there any particular elements of your initial teacher education programme that you think equipped you to meet the learning and teaching needs of children with autistic spectrum disorders? What types of courses in inservice education have you attended? What experiences prepared you most in meeting the needs of the children in the class? Why do you think these experiences were particularly beneficial in enabling you to do your work? Do you think that you might need further inservice education in the area of autistic spectrum disorders? Is access to inservice education in the area of autistic spectrum disorders readily available and easy to access?
<b>Concept of Educational Provision for Children with Autistic Spectrum Disorders</b>
From your experience, what do you think are the critical elements of appropriate educational provision for children with autistic spectrum disorders? What do you see as the key areas of curriculum for children with autistic spectrum disorders? Are there difficulties in providing curricular access?
<b>Pedagogy</b>
What autistic spectrum disorder- specific teaching approaches do you use in implementing children's learning and teaching programmes? Do you use any teaching approaches advocated in the Primary School Curriculum? What prompts you to select a particular teaching approach? What teaching approaches do you find are most effective in implementing children's learning and teaching programmes? What teaching approaches do you find are least effective in implementing children's learning and teaching programmes?
<b>Planning, Monitoring and Recording Children's Learning and Teaching</b>
How do you plan for individual children's learning and teaching programmes? What documents do you use in planning for children's programmes? Do you have access to relevant professional reports when planning children's programmes? What systems do you use to monitor children's progress? How do you record children's progress? Is there a link between your planning and whole-school planning? When do you plan for children's learning and teaching programmes?
<b>Assessment</b>
What methods of assessment do you use in curriculum planning and provision? Are there methods of assessment that you find particularly effective? How often do you engage in assessment of children's learning and teaching?
<b>Parental Involvement</b>
Are parents/carers involved in their children's education programmes? Are there particular structures in place that facilitate parental involvement?
<b>Support Structures</b>
When you encounter a problem in meeting the needs of children with autistic spectrum disorders, who do you consult with initially? What kind of additional support structures in meeting the needs of children with autistic spectrum disorders do you have access to?
<b>Impact of Inservice Education on Motivation</b>
Do you believe that participating in inservice education impacted positively on your own motivation? If so, can you identify specific ways that inservice education impacted positively on your own motivation? What particular aspects of the inservice education do you think impacted in a significant manner on your own motivation?
<b>Conclusion</b>
Is there any other aspect of your experience of providing for children with autistic spectrum disorders that you think is important and that hasn't been addressed in this interview?

## School Principals' Semi-Structured Interview Schedule

Semi-Structured School Principal's Interview Schedule
<p><b>Concept of Educational Provision for Children with Autistic Spectrum Disorders</b></p> <p>What are your views on the nature of educational provision for children with autistic spectrum disorders? How do you think educational provision for children with autistic spectrum disorders relates to the rest of the school? What are the benefits of having specific educational provision for children with autistic spectrum disorders in the school? Are there challenges in having specific educational provision for children in the school?</p>
<p><b>Initial Teacher Education and Inservice Education</b></p> <p>Were there any particular elements of your initial teacher education programme that you think equipped you to meet the needs of children with autistic spectrum disorders? Have you had any opportunities to attend autistic spectrum disorder-specific inservice education ? What experiences prepared you most in meeting the needs of the children with autistic spectrum disorders? Why do you think these experiences were particularly beneficial? Do you think that you might need further inservice education in the area of autistic spectrum disorders? Is access to inservice education in the area of autistic spectrum disorders readily available and easy to access?</p>
<p><b>Approaches to Meeting the Needs of Children with Autistic Spectrum Disorders?</b></p> <p>Are there particular approaches adopted on a whole-school basis in meeting the needs of children with autistic spectrum disorders? Have you found particular approaches effective in meeting children's needs? Have you found particular approaches to be of little benefit in meeting children's needs?</p>
<p><b>Support Structures</b></p> <p>When you encounter a problem in meeting the needs of children with autistic spectrum disorders, who do you consult with initially? Do you have access to additional support structures in meeting the needs of children with autistic spectrum disorders?</p>
<p><b>Issues Related to the Management of Provision</b></p> <p>Are there particular issues related to the management of provision for children with autistic spectrum disorders that you feel you weren't equipped for as principal of the school? Do you feel that a particular model of inservice education could be provided to prepare principals for managing provision for children with autistic spectrum disorders?</p>
<p><b>Conclusion</b></p> <p>Is there any other aspect of your experience of providing for children with autistic spectrum disorders that you think is important and that hasn't been addressed in this interview?</p>

## Focused Semi-Structured Group Interview Schedule

Focused Semi-Structured Group Interview Schedule
<p><b>Concept of Educational Provision for Children with Autistic Spectrum Disorders</b></p> <p>What are your views on the nature of educational provision for children with autistic spectrum disorders?            How do you think educational provision for children with autistic spectrum disorders relates to the rest of the school?            What are the benefits of having specific educational provision for children with autistic spectrum disorders in the school?            Are there challenges in having specific educational provision for children in the school?</p>
<p><b>Initial Teacher Education and Inservice Education</b></p> <p>Were there any particular elements of your initial teacher education programme that you think equipped you to meet the needs of children with autistic spectrum disorders?            Have you had any opportunities to attend autistic spectrum disorder-specific inservice education ?            What experiences prepared you most in meeting the needs of the children with autistic spectrum disorders?            Why do you think these experiences were particularly beneficial?            Do you think that you might need further inservice education in the area of autistic spectrum disorders?            Is access to inservice education in the area of autistic spectrum disorders readily available and easy to access?</p>
<p><b>Approaches to Meeting the Needs of Children with Autistic Spectrum Disorders?</b></p> <p>Are there particular approaches adopted on a whole-school basis in meeting the needs of children with autistic spectrum disorders?            Have you found particular approaches effective in meeting children's needs?            Have you found particular approaches to be of little benefit in meeting children's needs?</p>
<p><b>Support Structures</b></p> <p>When you encounter a problem in meeting the needs of children with autistic spectrum disorders, who do you consult with initially?            Do you have access to additional support structures in meeting the needs of children with autistic spectrum disorders?</p>
<p><b>Conclusion</b></p> <p>Is there any other aspect of your experience of providing for children with autistic spectrum disorders that you think is important and that hasn't been addressed in this interview?</p>

## Template for Recording of Critical Event

Critical event number: \_\_\_\_\_

What was the antecedent of the event?

What happened?

What was the outcome?

## Time Sampling of Pupils' On/Off-Task Behaviour

X = off-task behaviour

Time	2	4	6	8	10	12	14	16	18	20	22	24	26	28	30	32	34	36
Pupil 1																		
Pupil 2																		
Pupil 3																		
Pupil 4																		
Pupil 5																		
Pupil 6																		

## Appendix D

### Template for Recording Teachers' Profiles

Teaching Qualifications	Other Academic Qualifications
<b>Number of Years Teaching Experience <i>Prior</i> to Appointment in this School (state in terms of days/weeks/months/years e.g. 3 days April 2004/ 4 weeks May 2005/March-June 2006/1994-1998 etc <i>whichever is relevant</i>)</b>	
<b>In Mainstream Primary School:</b>	<b>In Special School (state category of school)</b>
<b>In Special School/Class for Children with ASDs:</b>	<b>In Other Setting (give details):</b>
<b>In Present Position:</b>	<b>Total Number of Years Teaching Experience:</b>

<b><i>In-service Education</i></b>	
<i>(State year, period of programme and accrediting body or institution)</i>	
Special Education	Autistic Spectrum Disorder- Specific Education
Special Education	Autistic Spectrum Disorder- Specific Education
Special Education	Autistic Spectrum Disorder- Specific Education



### Appendix D

### Template for Recording Pupils' Profiles

<b>Pupil No.</b>	<b>DOB</b>	<b>Gender (M/F)</b>	<b>Diagnosis</b>	<b>Additional Assessed Special Educational Needs</b>	<b>Assessed Level of Intellectual Ability</b>

## Appendix E

### Correspondence with Research Participants

#### Letter issued by Third-Level Institution Indicating Imminent Research Project

##### Studies in Teacher Education in Autistic Spectrum Disorders

There have been many developments in recent years in the area of teacher education for teachers who are working with pupils with autistic spectrum disorders (ASDs). The Special Education Department in St. Patrick's College has been involved in the delivery of a graduate certificate in autism since 2001 (in collaboration with the University of Birmingham 2001-2003). We are concerned with monitoring and evaluating our teacher education programme in autism, with a view to improving standards and thus enhancing educational provision for children and young people with ASDs. For this purpose, we are seeking your co-operation with two projects.

The first project is a survey of teachers who participated in the one-year graduate certificate course in autism 2001-2006. We are seeking your views about the content and mode of delivery of the course. We would be delighted if you would complete the attached questionnaire and return it to us by the due date. Your experience and views of the Autism course will be very valuable in its future development.

The second project also relates to teacher education and ASD. Emer Ring is a PhD student at St. Patrick's College. She proposes to engage in a research project entitled "An Evaluation of the Effects of Autistic Spectrum Disorder-Specific Inservice Training on the Approaches to Learning and Teaching adopted by Teachers" in the 2006-2007 school year. Emer is interested in assessing the benefits and practical impact of the autistic spectrum disorder-specific inservice training course for teachers. It is hoped that this research will contribute to the understanding and development of comprehensive and high quality inservice training for teachers of children with ASDs in Ireland in the future. Details of this project and a request for you to participate will follow.

We would appreciate your co-operation in supporting and participating in these projects and we would be very grateful if you could take time out of your busy schedules to do this.

Director of Special Education.

31<sup>st</sup> May 2006

**Follow-Up Letter issued by Third-Level Institution Eliciting Interest in  
Participating in the Research**

8<sup>th</sup> November 2006

Dear (Teacher's Name),

Emer Ring is a Ph.D. student at St. Patrick's College. She proposes to engage in a research project entitled "An Evaluation of the Effects of Autistic Spectrum Disorder-Specific Inservice Training on the Approaches to Learning and Teaching adopted by Teachers" in the 2006/2007 school year. Emer is interested in assessing the benefits and the practical impact of an autistic spectrum disorder-specific inservice training course for teachers. It is hoped that this research will contribute to the understanding and development of comprehensive and high quality inservice training for teachers of children with autistic spectrum disorders in Ireland in the future.

As you have participated in the post-graduate certificate course for teachers of pupils with autistic spectrum disorders here in the college, you are invited to participate in the research. Your participation in the research would be greatly appreciated and would considerably enhance this research project. Your participation in the research will be entirely voluntary, you will be free to refuse to answer any question and you may choose to withdraw from the project at any time. Should you consent to becoming involved in this research, you will be invited to select a lesson from your daily time-table and consent to having the lesson taped on video at a predetermined date and time of your choice. Emer will return to the school to conduct a semi-structured interview with you. It will be necessary to tape this interview using an audio-tape to ensure that all of the information is retained. The principal and teaching staff in the school will also be invited to a focus semi-structured group interview in order to elicit their views on the effects of the inservice training in the school. All data will be closely examined to identify the themes and issues related to the issue being researched. Emer will return to the school following analysis of all of the data and present the findings of the research. During a scheduled group-session, all who participated in the research will be invited to respond to the research findings. This response will then be incorporated in the research. A written summary of the final composite research findings will be sent to the school. A written summary of the final composite research findings will also be provided for the Department of Education and Science.

Electronic and written information will be kept strictly confidential, subject to the limitations of the law, and will be available only to Emer, her supervisors and an auditor who will be certifying that she is using the stated research methods. Excerpts from the data collected during the research process may be made part of the final thesis, but under no circumstances will your name or any identifying characteristics be included in the thesis. Data collected for the research will not be used for any other purpose without seeking additional permission from you.

If you are interested in participating in the research, I would be grateful if you would indicate your interest in participating by signing the form below and returning it to

the Special Education Department, St. Patrick's College, in the stamped addressed envelope provided.

Emer will be in touch with you following the return of these forms.

Your co-operation in this research would be greatly appreciated,

Yours Sincerely,

Director of Special Education  
On behalf of Emer Ring

---

I \_\_\_\_\_ am interested in participating in the research project entitled "An Evaluation of the Effects of Autistic Spectrum Disorder-Specific Inservice Training on the Approaches to Learning and Teaching adopted by Teachers" being conducted by Emer Ring as part of the requirements for the award of the degree of Ph.D at St. Patrick's College, Drumcondra, Dublin 9

I give permission for my name and contact details to be released to Emer Ring.

Signed: \_\_\_\_\_

Date: \_\_\_\_\_

**Holding Letter Forwarded to Teachers who had Indicated an Interest in Being  
Involved in the Research**

XXXXXX  
03-01-'07.

XXXXXX,  
XXXXXXXXXX,  
XXXXXXXXXXXXXXXXXX,  
XXXXXXXXXXXXXXXXXXXXXX

Dear ,

Thank you for expressing interest in participating in the research being conducted by me as part of the requirements for the award of the degree of Ph.D. at St. Patrick's College, Drumcondra, Dublin 9.

Unfortunately I will be unable to involve all of those who have responded as the time-frame of the research necessitates selecting a total of ten research participants. I will shortly be undertaking a selection process based on the geographical proximity of respondents to both my home address and possible work locations from January 2007 to June 2007.

Your expression of interest in the research project is greatly appreciated and I will be in contact with you in the near future in relation to the research.

Should you wish to contact me in the meantime, my mobile phone number is  
XXXX.

Yours Sincerely,

---

Emer Ring, Researcher

**Letter of Acknowledgement to Respondent Unable to Participate Due to Other  
Commitments**

XXXXXX

03-01-'07.

XXXXXX,

XXXXXXXX,

XXXXXXXXXXXX,

XXXXXXXXXXXXXXXXXXXX

Dear X,

Thank you for your letter with regard to the current research being conducted by me as part of the requirements for the award of the degree of Ph.D. at St. Patrick's College, Drumcondra, Dublin 9.

I am sorry that you will be unable to participate in the research and I appreciate your offer of completing a questionnaire. However I am not using questionnaires as part of the methodology. I wish you the best with your own courses and in your work in the future. Your letter and expression of good wishes are greatly appreciated.

Yours Sincerely,

---

Emer Ring, Researcher

**Letter of Thanks to Research Respondents not Participating in Research**

XXXXXXXX

12-03-'07.

XXXXXXXX,  
XXXXXXXXXXXXXX,  
XXXXXXXXXXXXXXXXXX

Dear X,

Thank you for expressing interest in participating in the research being conducted by me as part of the requirements for the award of the degree of Ph.D. at St. Patrick's College, Drumcondra, Dublin 9.

Unfortunately I am unable to involve all of those who have responded as the time-frame of the research necessitates selecting a total of ten research participants. I have completed the sampling process based on the geographical proximity of respondents to both my home address and possible work locations to June 2007.

I want to thank you for your generosity in responding to the request to become involved in the research.

I wish you continued success in your work.

Should you wish to contact me, my mobile phone number is XXXXXX.

Yours Sincerely,

---

Emer Ring, Researcher

## Holding Letter Forwarded to Respondent Teaching in an Irish Speaking Area

*Home address in Irish*

XXXXX

03-01-'07.

XXXXXX,

XXXXXXXXXX,

XXXXXXXXXXXXXXXXXX,

XXXXXXXXXXXXXXXXXXXXXX

A X a chara,

Míle buíochas dod' shuim maidir le páirt a ghlacadh san taighde ar uathachas atá idir lámha agam faoi láthair.

Is trua nach mbeidh cách in ann bheith páirteach san taighde ach mar gheall ar easpa ama ní bheidh ach deichniúr ar fad i gceist. Go gairid beidh na rannpháirtithe á roghnú agam bunaithe ar a ngaireacht do m'áit chónaithe agus do mo chúrsaí oibre ó Eanáir 2007 go dtí Meitheamh 2007.

Táim fíor-bhuíoch díot as do chuid suime agus beidh mé i dteagmháil leat i gceann tamaill.

Idir an dá linn, más mian leat, is féidir teagmháil a dhéanamh liom ar XXXXX.

Mise le Meas,

---

Emer Ring, Taighdeoir



**Letter of Thanks to Research Respondent in Irish Speaking Area not  
Participating in Research**

*Home address in Irish*

XXXXXX,

12-03-'07.

XXXXXX,

XXXXXXXXXX,

XXXXXXXXXXXXXXXX,

XXXXXXXXXXXXXXXXXXXX

A X a chara,

Míle buíochas dod' shuim maidir le páirt a ghlacadh san taighde ar uathachas atá idir lámha agam faoi láthair.

Is trua nach mbeidh cách in ann bheith páirteach san taighde ach mar gheall ar easpa ama ní bheidh ach deichniúr ar fad i gceist. Tá na rannpháirtithe roghnaithe agam bunaithe ar a ngaireacht do m'áit chónaithe agus do mo chúrsaí oibre go Meitheamh 2007.

Táim fíor-bhuíoch díot as do chuid suime agus go n-éirí go geal leat le do chuid oibre i gcónaí

Más mian leat, is féidir teagmháil a dhéanamh liom ar 087 6500832.

Mise le Meas,

---

Emer Ring, Taighdeoir

## Letter to Parents of Children Participating in Research Seeking Parental Permission

XXXXXX  
12-03-'07

Dear Parent/s,

My name is Emer Ring, I am doing a research project entitled "An Evaluation of the Effects of Autistic Spectrum Disorder-Specific Inservice Education on the Approaches to Learning and Teaching adopted by Teachers". I am interested in assessing the benefits and the practical impact of an autistic spectrum disorder-specific inservice education course, being conducted in St. Patrick's College, Drumcondra, Dublin 9 for teachers of children with autistic spectrum disorders. The project is to be submitted to St. Patrick's College as part of the requirements for the award of the degree of Ph.D. The fees for the project are being paid by the Staff Training and Development Unit of the Department of Education and Science. All other expenses incurred are being paid by myself and the project is being undertaken in my own time. I am the sole researcher for the project.

The school, which your child attends has agreed to become involved in the research. Part of the project involves video-taping a lesson in which your child will be participating. The minimum duration of the lesson will be twenty minutes and the maximum duration of the lesson will be forty minutes. With your permission, your child will be video-taped as part of the general lesson.

Video-tapes will be stored securely by me for the duration of the study. Raw and processed data will be destroyed following completion of the research. Data retained on video-tapes will be erased. Electronic and written information will be kept strictly confidential, subject to the limitations of the law, and will be available only to the researcher and an auditor who will be certifying that the researcher is using the stated research methods. I will also be using a digital-camera to photograph learning materials and resources. Your child will not be included in these photographs. Excerpts from the data collected during the research process may be made part of the final thesis, but under no circumstances will the child's name or any identifying characteristics be included in the thesis. Data collected for the research will not be used for any other purpose without seeking additional permission from you. A written summary of the final research findings will be sent to the school. A written summary of the research findings will also be provided for the Department of Education and Science.

Should you wish to discuss any aspect of the project or raise any questions related to the project, you may contact me at any time. I may be contacted at XXX. My home phone number is XXX and my mobile phone number is XXXX. My e-mail address is XXX.

Your co-operation in this research would be greatly appreciated,

Yours Sincerely,

---

Emer Ring, Researcher

Parental Consent Form

I \_\_\_\_\_ give

\_\_\_\_\_ do not give permission to have my child

\_\_\_\_\_  
(child's name)

participate in the project combining the research entitled "An Evaluation of the Effects of Autistic Spectrum Disorder-Specific Inservice Education on Teachers' Professional Practice" and the work of the Special Education Support Service. I understand the nature of the study.

I \_\_\_\_\_ give

\_\_\_\_\_ do not give permission to have my child

\_\_\_\_\_  
(child's name)

participate in the research entitled "An Evaluation of the Effects of Autistic Spectrum Disorder-Specific Inservice Education on the Approaches to Learning and Teaching adopted by Teachers". I understand the nature of the study and the amount of time involved.

## Letter to Chairperson of the Board of Management

XXXXXX  
12-03-'07

Dear Chairperson,

My name is Emer Ring, I am doing a research project entitled "An Evaluation of the Effects of Autistic Spectrum Disorder-Specific Inservice Education on the Approaches to Learning and Teaching adopted by Teachers. I am interested in assessing the benefits and the practical impact of an autistic spectrum disorder-specific inservice education programme, being conducted in St. Patrick's College, Drumcondra, Dublin 9 for teachers of children with autistic spectrum disorders and for the schools in which they are teaching. The project is to be submitted to St. Patrick's College as part of the requirements for the award of the degree of Ph.D. The fees for the project are being paid by the Staff Training and Development Unit of the Department of Education and Science. All other expenses incurred are being paid by myself and the project is being undertaken in my own time. I am the sole researcher for the project.

I have discussed the aim and purpose of my research with the class teacher in the school and she has agreed to participate. I will also be discussing the aim and purpose of the research with the principal. I propose to obtain the permission of the parents in the class for children with autistic spectrum disorders in order to ensure that they are satisfied to permit their children to be involved in the research. Part of the project involves video-taping a lesson in the class for children with autistic spectrum disorders. The minimum duration of the lesson will be twenty minutes and the maximum duration of the lesson will be forty minutes. The lesson will be chosen by the teacher. The video-tape will then be analysed and the class teacher will be invited to participate in a semi-structured interview based on the analysis of the video-tape. The principal and selected members of staff will be invited to participate in an interview to explore their experience of meeting the needs of children with autistic spectrum disorders, in particular as it relates to autistic spectrum disorder-specific inservice education.

Video-tapes will be stored securely by me for the duration of the study. Raw and processed data will be destroyed following completion of the research. Data retained on audio and video tapes will be erased. Electronic and written information will be kept strictly confidential, subject to the limitations of the law, and will be available only to the researcher and an auditor who will be certifying that the researcher is using the stated research methods. Excerpts from the data collected during the research process may be made part of the final thesis, but under no circumstances will any identifying characteristics of the participants or school be included in the thesis. Data collected for the research will not be used for any other purpose without seeking additional permission from participants. A written summary of the final research findings will be sent to the school. A written summary of the research findings will also be provided for the Department of Education and Science.

I would like to take this opportunity to thank you for the privilege of conducting this research in your school. I hope that this research will contribute to the understanding and development of comprehensive and high quality inservice education for teachers of children with autistic spectrum disorders in the future. Should you wish to discuss any aspect of the project or raise any questions related to the project, you may contact me at any time. I may be contacted at XXXXXX. My home phone number is XXX and my mobile phone number is XXX. My e-mail address is XXX

Yours Sincerely,

---

Emer Ring

**APPENDIX F**  
**Social Story Explaining Videoing of Classroom Practice**  
**Social Story**

**We do lots of fun things in this school.**



**We like to work hard and finish our jobs on time.**



**Two ladies are coming to see us doing our work tomorrow.**



**One of the ladies is bringing a camera so she can see how we do our work when she goes home.**



**We will have a fun day tomorrow.**

## APPENDIX G

### Amended Letter Seeking Parental Permission for Pilot Testing of Research Procedures and Data-Collection Instruments

XXXXXXX

20-11-'06

Dear Parent/s,

My name is Emer Ring, I am doing a research project entitled "An Evaluation of the Effects of Autistic Spectrum Disorder-Specific Inservice Education on Teachers' Professional Practice". I am interested in assessing the benefits and the practical impact of an autistic spectrum disorder-specific inservice education programme, being conducted in St. Patrick's College, Drumcondra, Dublin 9 for teachers of children with autistic spectrum disorders. The project is to be submitted to St. Patrick's College as part of the requirements for the award of the degree of Ph.D. The fees for the project are being paid by the Staff Training and Development Unit of the Department of Education and Science. All other expenses incurred are being paid by myself and the project is being undertaken in my own time. I am the sole researcher for the project. Part of the project involves video-taping a lesson in which your child will be participating. With your permission, your child will be video-taped as part of the general lesson.

Video-tapes will be stored securely by me for the duration of the study. Raw and processed data will be destroyed following completion of the research. Data retained on video-tapes will be erased. Electronic and written information will be kept strictly confidential, subject to the limitations of the law, and will be available only to the researcher and an auditor who will be certifying that the researcher is using the stated research methods. Excerpts from the data collected during the research process may be made part of the final thesis, but under no circumstances will the child's name or any identifying characteristics be included in the thesis. Data collected for the research will not be used for any other purpose without seeking additional permission from you. A written summary of the final research findings will be sent to the school. A written summary of the research findings will be provided for the Department of Education and Science.

I also work as an inspector with the Department of Education and Science and I am involved with the Special Education Support Service (SESS). The SESS provides professional development and support for teachers working with children with special educational needs. As part of a commitment to assisting teachers in meeting the needs of pupils with special educational needs, the SESS plans to compile a series of video-recordings of good practice in a number of selected schools. These videos will be stored securely and will be used only in implementing professional development and support programmes for teachers, special needs assistants and personnel employed by the Department of Education and Science.

[Name of school deleted] has been invited to participate in a project that combines the aims of both projects. Should you wish to discuss any aspect of the project or raise any questions related to the project, you may contact me at any time. I may be contacted at X. My home phone number is X and my mobile phone number is X. My e-mail address is X.

Your co-operation in this project would be greatly appreciated and it is hoped that the research outcomes will further assist teachers and schools in meeting the needs of children with special educational needs in all schools.

Yours Sincerely,

---

Emer Ring, Researcher

I \_\_\_\_\_ give

\_\_\_\_\_ do not give permission to have my child

\_\_\_\_\_  
(child's name)

participate in the project combining the research entitled "An Evaluation of the Effects of Autistic Spectrum Disorder-Specific Inservice Education on Teachers' Professional Practice" and the work of the Special Education Support Service. I understand the nature of the study.

I \_\_\_\_\_ give

\_\_\_\_\_ do not give permission to have my child

\_\_\_\_\_  
(child's name)

participate in the research entitled "An Evaluation of the Effects of Autistic Spectrum Disorder-Specific Inservice Education on Teachers' Professional Practice" and the work of the Special Education Support Service. I understand the nature of the study.

## APPENDIX H

### Audit Trail Substance and Structure

Audit Trail Substance	Audit Trail Structure
<b>Raw Data</b>	<p><i>Electronically Recorded Materials: digitally-recorded interviews; video-recordings of classroom practice, transcripts.</i></p> <p><i>Schedules: classroom observation schedules; on-task records; critical event records; teachers' qualifications; pupils' profiles; inter-rater classroom observation schedules.</i></p> <p><i>Field Note journals</i></p>
<b>Data Reduction and Analysis</b>	<p><i>Reflexive Journal: events, behaviours, themes, ideas, concerns, hypotheses, possible concepts and hunches.</i></p> <p><i>Coding of Data: electronic coding of data</i></p>
<b>Data Reconstruction and Synthesis</b>	<p><i>Findings and Conclusions</i></p> <p><i>Implications for Future Policy and Practice</i></p>
<b>Process</b>	<p><i>Rationale for Chosen Methodology</i></p> <p><i>Trustworthiness Criteria</i></p>
<b>Intentions and Dispositions</b>	<p><i>Research Question</i></p> <p><i>Literature Review</i></p> <p><i>Reflexive Journal</i></p> <p><i>Peer-debriefing Records</i></p>
<b>Instrument Development</b>	<p><i>Correspondence with Research Participants</i></p> <p><i>Summary of Piloting Process</i></p> <p><i>Interview Schedules</i></p> <p><i>Classroom Observation Schedules</i></p> <p><i>On-Task Records</i></p> <p><i>Critical Event Records</i></p> <p><i>Records of Parental Permission</i></p> <p><i>Calculations of Inter-rater Reliability</i></p>



**APPENDIX I**  
**Auditor's Final Summary Letter**

To Whom it Concerns,

I have acted as auditor for the research study entitled "*An Evaluation of the Effects of an Autistic Spectrum Disorder-Specific Post-Graduate Certificate Continuing Professional Development Programme on Practice in Six Schools*", which was commenced by Emer Ring in October 2005.

I have conducted my role with reference to the audit trail compiled for this research. I am satisfied from my engagement with the process that the researcher sourced and collated the raw data referred to in the study and reduced, analysed and reconstructed the data in accordance with the analytical methods described. The instruments developed by the researcher were available to me for examination. The processes described by the researcher indicate that she attended to the concept of trustworthiness and producing valid and reliable data in an ethical manner.

I conclude that the findings, conclusions and implications for future policy and practice are fair and related to the research process.

---

(Name of Auditor has been removed) 27-12-'2009

## **APPENDIX J**

### **Terms of Reference for Critical Friend**

- Engage in questioning and provide advice related to substantive, methodological, legal, ethical or other relevant matters pertinent to the research.
- Probe researcher's apparent biases.
- Explore and challenge meanings.
- Clarify the bases for interpretations.
- Explore and test working hypotheses that are emerging.
- Provide the researcher with an opportunity for catharsis.
- Engage carefully and empathetically with the debriefing process.
- Keep summary notes of the debriefing encounters.

**Appendix K**  
**Integrative Diagrams**

The integrative diagrams below display the interrelationships of emerging themes and quantify their occurrence. Colour-coding is used to indicate the relationship between the open coding of the data and the pattern coding.

<b>Teachers' Interview Codes Who Have Completed the Post-Graduate Programme</b>	
<b>Open-Coding</b>	<b>Pattern-Coding</b>
<p><b>Special Needs Assistants</b></p> <p><b>Initial Teacher Education</b></p> <p><b>Self-Questioning</b></p> <p><b>Motivation</b></p> <p><b>Prior Teaching Experience</b></p> <p><b>Multi-Disciplinary Support</b></p> <p><b>In-School Support</b></p> <p><b>Parents</b></p> <p><b>Experience of Initial Establishment of Class</b></p> <p><b>Impact of Continuing Professional Development</b></p> <p><b>Practitioner</b></p> <p><b>Individual Education Plans</b></p> <p><b>Assessment</b></p> <p><b>Curriculum</b></p> <p><b>Teacher Articulation</b></p> <p><b>Heterogeneous Needs</b></p> <p><b>Autistic Spectrum Disorder-Specific Approaches</b></p> <p><b>Litigation and the Media</b></p> <p><b>Special Education Support Service</b></p> <p><b>Bricoleur</b></p> <p><b>Music</b></p> <p><b>Life Experiences</b></p>	<p><b>Support Structure</b></p> <p><b>Prior Professional Experiences</b></p> <p><b>Motivation and Reasons for Choice of Programme</b></p> <p><b>Teachers' Attitudes to New Professional Challenges</b></p> <p><b>Appropriateness of Content and Process</b></p> <p><b>Participants' Cognitive, Affective and Behavioural Learning</b></p> <p><b>Participants' Use of Knowledge and Skills</b></p> <p><b>Additional Emerging Issues</b></p>
<b>Selective Coding</b>	
<p><b>Participants' Motivation and Reasons for Choice of Programme (29)</b></p> <p><i>Interest in Area of Autistic Spectrum Disorders (12)</i></p> <p><i>Altruistic Reasons (2)</i></p> <p><i>Children's Progress (1)</i></p> <p><i>Initial Apprehension of Teaching Pupils with Autistic Spectrum Disorders (11)</i></p> <p><i>Life Experiences (3)</i></p>	
<p><b>Participants' Prior Professional Experiences (63)</b></p> <p><i>Inadequacy of Special Education Input in Initial Teacher Education (10)</i></p> <p><i>Contribution of Initial Teacher Education to Teachers' Knowledge Base (42)</i></p> <p><i>Role of Experience in Initial Teacher Education in Applying for Post to Teach Pupils with Autistic Spectrum Disorders (4)</i></p> <p><i>Prior Experiences Teaching Pupils with Special Educational Needs (5)</i></p> <p><i>Prior Experiences Teaching Junior Classes (1)</i></p> <p><i>Prior Experience Working in a Disadvantaged Setting (1)</i></p>	

<p><b>Teachers' Attitudes to New Professional Challenges (30)</b>  <i>Practitioner Reflection (19)</i>  <i>Bricoleur (11)</i></p>
<p><b>Appropriateness of Content and Process /Cognitive, Affective and Behavioural Learning (150)</b>  <i>Stimulus for Further Learning (6)</i>  <i>The Value of External Experienced Experts (8)</i>  <i>Access to Parents of Pupils with Autistic Spectrum Disorders (2)</i>  <i>Interacting with Other Practitioners (9)</i>  <i>Engaging with the Experiences of Individuals with Autistic Spectrum Disorders (11)</i>  <i>Specific Benefits of Engaging with the Programme (18)</i>  <i>Potential Additions to the Programme (25)</i>  <i>Reference to an Unpleasant Continuing Professional Development Experience (5)</i>  <i>Practicum (21)</i>  <i>Curriculum (45)</i></p>
<p><b>Organisational Support and Change (98)</b>  <i>Role of the Principal (16)</i>  <i>School Contexts (4)</i>  <i>Availability of Multi-disciplinary Support (32)</i>  <i>Management of Special Needs Assistant-Support (26)</i>  <i>A Clear Understanding of the Role of the Special Needs Assistant (10)</i>  <i>Training for Special Needs Assistants (10)</i></p>
<p><b>Participants' Use of Knowledge and Skills (86)</b>  <i>Heterogeneous Needs (7)</i>  <i>Assessment (14)</i>  <i>Individual Education Plans (16)</i>  <i>Parents (49)</i></p>
<p><b>Additional Emerging Issues</b>  <i>Teacher Articulation (10)</i>  <i>Autistic Spectrum Disorder-Specific Approaches (60)</i>  <i>Applied Behaviour Analysis (15)</i>  <i>Inclusion (11)</i>  <i>Treatment and Education of Autistic and related Communication handicapped Children (9)</i>  <i>Combined-Skills Approach (9)</i>  <i>Counter-Intuitive Approach (6)</i>  <i>Developmental Approach (4)</i>  <i>Social Stories (2)</i>  <i>Marte Meo (3)</i>  <i>Manual Signing System (1)</i>  <i>Litigation and the Media (17)</i>  <i>Special Education Support Service (27)</i>  <i>Music (4)</i></p>

**Teachers' Interview Codes Who Have Not Completed the Post-Graduate Programme**

Open-Coding	Pattern-Coding
<p><b>Special Needs Assistants</b></p> <p><b>Initial Teacher Education</b></p> <p><b>Self-Questioning</b></p> <p><b>Motivation</b></p> <p><b>Experience of Initial Establishment of Class</b></p> <p><b>Prior Teaching Experience</b></p> <p><b>Multi-Disciplinary Support</b></p> <p><b>In-School Support</b></p> <p><b>Parents</b></p> <p><b>Individual Education Plans</b></p> <p><b>Assessment</b></p> <p><b>Curriculum</b></p> <p><b>Probation</b></p> <p><b>Heterogeneous Needs</b></p> <p><b>Autistic Spectrum Disorder-Specific Approaches</b></p> <p><b>Litigation and the Media</b></p> <p><b>Continuing Professional Development Accessed</b></p> <p><b>Bricoleur</b></p> <p><b>Music</b></p> <p><b>Special Education Support Services</b></p> <p><b>Life Experiences</b></p> <p><b>Additional Time Required</b></p>	<p><b>Support Structure</b></p> <p><b>Prior Professional Experiences</b></p> <p><b>Motivation</b></p> <p><b>Teachers' Attitudes to New Professional Challenges</b></p> <p><b>Participants' Use of Knowledge and Skills</b></p> <p><b>Additional Emerging Issues</b></p> <p><b>Participants' Cognitive, Affective and Behavioural Learning</b></p>

**Selective Coding**

- Participants' Motivation (28)**
- Interest in Area of Autistic Spectrum Disorders (11)*
- Interest in the Area of Special Education (8)*
- Life Experiences (8)*
- Experience of Initial Establishment of Class (1)*
- Participants' Prior Professional Experiences (50)**
- Inadequacy of Special Education Input in Initial Teacher Education (9)*
- Contribution of Initial Teacher Education to Teachers' Knowledge Base (10)*
- Role of Experience in Initial Teacher Education in Applying for Post to Teach Pupils with Autistic Spectrum Disorders (2)*
- Prior Experiences Teaching Pupils with Special Educational Needs (11)*
- Prior Experiences Teaching Pupils with Autistic Spectrum Disorders (18)*
- Teachers' Attitudes to New Professional Challenges (37)**
- Practitioner Reflection (18)*
- Bricoleur (6)*
- Additional Time Required (13)*
- Cognitive, Affective and Behavioural Learning (46)**
- Continuing Professional Development Programmes Accessed (15)*
- Reference to an Unpleasant Continuing Professional Development Experience (5)*
- On-line Learning (3)*
- Curriculum (23)*

**Organisational Support and Change (46)**

*Role of the Principal (3)*

*Teaching Colleagues (4)*

*Availability of Multi-disciplinary Support (5)*

*Management of Special Needs Assistant-Support (19)*

*A Clear Understanding of the Role of the Special Needs Assistant (13)*

*Training for Special Needs Assistants (2)*

**Participants' Use of Knowledge and Skills (47)**

*Heterogeneous Needs (10)*

*Assessment (7)*

*Individual Education Plans (6)*

*Parents (24)*

**Additional Emerging Issues**

*Autistic Spectrum Disorder-Specific Approaches (29)*

*Applied Behaviour Analysis (1)*

*Treatment and Education of Autistic and related Communication handicapped Children (2)*

*Combined-Skills Approach (8)*

*Counter-Intuitive Approach (8)*

*Social Stories (2)*

*Experiential Learning (6)*

*Picture Exchange Communication System (2)*

*Litigation and the Media (11)*

*Special Education Support Service (15)*

*Music (5)*

*Probation (5)*

**Principals' Interview Codes in Schools Where Teachers Had Completed the Post-Graduate Programme**

Open-Coding	Pattern-Coding
<p><b>Special Needs Assistants</b></p> <p><b>Parents</b></p> <p><b>Applied Behaviour Analysis</b></p> <p><b>Cascade Effect</b></p> <p><b>Lack of Autistic Spectrum Disorder-Specific Continuing Professional Development</b></p> <p><b>School Management</b></p> <p><b>Management of Class</b></p> <p><b>Primary Curriculum Support Programme</b></p> <p><b>Acknowledgement of Expertise of Class Teacher</b></p> <p><b>Difficulty in Recruiting Teachers</b></p> <p><b>Difficulty in Recruiting Special Needs Assistants</b></p> <p><b>Collaborative Approach</b></p> <p><b>Initial Teacher Education</b></p> <p><b>Deskilling Factor</b></p> <p><b>Prohibition</b></p> <p><b>Inclusion</b></p> <p><b>Music</b></p> <p><b>Motivation</b></p> <p><b>Experience of Initial Establishment of Class</b></p> <p><b>Litigation and the Media</b></p> <p><b>Special Education Support Service</b></p> <p><b>Support from Department of Education and Science Personnel. Health/Education Divide</b></p> <p><b>The Role of the Principal</b></p> <p><b>Autistic Spectrum Disorder-Specific Continuing Professional Development Accessed</b></p>	<p><b>Organisational Support</b></p> <p><b>Organisational Change</b></p> <p><b>Prior Professional Experiences</b></p> <p><b>Additional Emerging Issues</b></p>

**Selective Coding**

**Organisational Support (284)**  
*The Role of the Principal (9)*  
*Motivation (18)*  
*Management of Class (90)*  
*School Management (32)*  
*Initial Establishment of Class (13)*  
*Difficulty in Recruiting Teachers (6)*  
*Difficulty in Recruiting Special Needs Assistants (1)*  
*Lack of Autistic Spectrum Disorder-Specific Continuing Professional Development (16)*  
*Autistic Spectrum Disorder-Specific Continuing Professional Development Accessed (5)*

<p><b><i>Support of Department of Education and Science Personnel (6)</i></b>  <b><i>Health Education/Divide (18)</i></b>  <b><i>Parents (25)</i></b>  <b><i>Special Needs Assistants (45)</i></b></p>
<p><b><i>Organisational Change (78)</i></b>  <b><i>Cascade Effect (33)</i></b>  <b><i>Acknowledgement of Teachers' Expertise (15)</i></b>  <b><i>Inclusion (13)</i></b>  <b><i>Collaborative Approach (17)</i></b></p>
<p><b><i>Prior Professional Experiences (13)</i></b>  <b><i>Initial Teacher Education (13)</i></b></p>
<p><b><i>Additional Emerging Issues</i></b>  <b><i>Applied Behaviour Analysis (11)</i></b>  <b><i>Primary Curriculum Support Programme (4)</i></b>  <b><i>Probation (6)</i></b>  <b><i>Litigation and the Media (15)</i></b>  <b><i>Special Education Support Service (15)</i></b>  <b><i>Music (4)</i></b></p>



**Principals' Interview Codes in Schools Where Teachers Had Not Completed the Post-Graduate Programme**

Open-Coding	Pattern-Coding
<b>Special Needs Assistants</b> <b>Parents</b> <b>Applied Behaviour Analysis</b> <b>Cascade Effect</b> <b>Lack of Autistic Spectrum Disorder-Specific Continuing Professional Development</b> <b>School Management</b> <b>Management of Class</b> <b>Primary Curriculum Support Programme</b> <b>Acknowledgement of Expertise of Class Teacher</b> <b>Collaborative Approach</b> <b>Initial Teacher Education</b> <b>Probation</b> <b>Inclusion</b> <b>Motivation</b> <b>Experience of Initial Establishment of Class</b> <b>Litigation and the Media</b> <b>Special Education Support Service</b> <b>Health/Education Divide</b> <b>The Role of the Principal</b> <b>Autistic Spectrum Disorder-Specific Continuing Professional Development Accessed</b> <b>Siblings</b> <b>Pupil Awareness</b>	<b>Organisational Support</b> <b>Organisational Change</b> <b>Prior Professional Experiences</b> <b>Additional Emerging Issues</b>

**Selective Coding**

<b>Organisational Support (128)</b> <i>The Role of the Principal (9)</i> <i>Motivation (13)</i> <i>Management of Class (14)</i> <i>School Management (6)</i> <i>Initial Establishment of Class (4)</i> <i>Lack of Autistic Spectrum Disorder-Specific Continuing Professional Development (11)</i> <i>Autistic Spectrum Disorder-Specific Continuing Professional Development Accessed (14)</i> <i>Health Education/Divide (7)</i> <i>Parents (30)</i> <i>Special Needs Assistants (20)</i>
<b>Organisational Change (69)</b> <i>Cascade Effect (33)</i> <i>Acknowledgement of Teachers' Expertise (4)</i> <i>Inclusion (15)</i>

<b><i>Collaborative Approach (17)</i></b>
<b>Prior Professional Experiences (6)</b>
<b><i>Initial Teacher Education (6)</i></b>
<b>Additional Emerging Issues</b>
<b><i>Applied Behaviour Analysis (8)</i></b>
<b><i>Primary Curriculum Support Programme (2)</i></b>
<b><i>Probation (11)</i></b>
<b><i>Litigation and the Media (19)</i></b>
<b><i>Special Education Support Service (6)</i></b>
<b><i>Pupil Awareness (4)</i></b>
<b><i>Siblings (5)</i></b>

**Focus Group Interview Codes in Schools Where Teachers Had Completed the Post-Graduate Programme**

Open-Coding	Pattern-Coding
<b>Special Needs Assistants</b> <b>Parents</b> <b>Continuing Professional Development Required</b> <b>Teacher Articulation</b> <b>Cascade Effect</b> <b>Collaborative Approach</b> <b>Initial Teacher Education</b> <b>Personal Experience</b> <b>Probation</b> <b>Inclusion</b> <b>Music</b>	<b>Organisational Support</b> <b>Organisational Change</b> <b>Prior Professional Experiences</b> <b>Additional Emerging Issues</b>
<b>Selective Coding</b>	
<b>Organisational Support (23)</b> <i>Parents (9)</i> <i>Special Needs Assistants (14)</i>	
<b>Organisational Change (65)</b> <i>Cascade Effect (33)</i> <i>Inclusion (29)</i> <i>Collaborative Approach (3)</i>	
<b>Prior Professional Experiences (14)</b> <i>Initial Teacher Education (13)</i> <i>Personal Experience (1)</i>	
<b>Additional Emerging Issues</b> <i>Music (1)</i> <i>Continuing Professional Development Required (28)</i> <i>Teacher Articulation (3)</i>	

**Focus Group Interview Codes in Schools Where Teachers Had Not Completed the Post-Graduate Programme**

Open-Coding	Pattern-Coding
<b>Collaborative Approach</b> <b>Parents</b> Continuing Professional Development Required Initial Teacher Education Knowledge of Autistic Spectrum Disorders Motivation Litigation and Media Applied Behavioural Analysis Special Education Support Service	<b>Organisational Support</b> <b>Organisational Change</b> Prior Professional Experiences Additional Emerging Issues
Selective Coding	
<b>Organisational Support (8)</b> <i>Parents (8)</i>	
<b>Organisational Change (2)</b> <i>Collaborative Approach (2)</i>	
<b>Prior Professional Experiences (31)</b> <i>Initial Teacher Education (5)</i> <i>Knowledge of Autistic Spectrum Disorders (24)</i> <i>Motivation (2)</i>	
<b>Additional Emerging Issues (13)</b> <i>Continuing Professional Development Required (1)</i> <i>Litigation and the Media (3)</i> <i>Applied Behavioural Analysis (4)</i> <i>Special Education Support Service (5)</i>	

## APPENDIX L

### E-Mails and Research Summary To Elicit Participant Feedback

#### **E-Mail to Teacher Who Had Completed Autistic Spectrum Disorder-Specific Continuing Professional Development Programme**

Dear (Teacher's Name),

I am attaching a summary of the research completed by me, which evaluated the effects of a post-graduate autistic spectrum disorder-continuing professional development programme on practice in six schools.

In the letter, which I sent to you on November 8<sup>th</sup> 2006, it was stated that I would return to the school following analysis of all the data and present the findings of the research to all those who participated in the research. During my visit to your school, I informed you that this may not be possible but that instead I would forward you the findings of the research in order to give you and the research participants in the school an opportunity to respond to the findings. These responses will then be incorporated in the research.

I would be grateful if you would disseminate these findings to the research participants and provide them with my e-mail address XXX in order that they may respond to the attached findings, should they wish to do so. You may also give them my mobile number XXX, should they wish to contact me at any time.

I would be grateful if you could inform the research participants that I would appreciate the return of responses by Friday November 13th.

Thank you once again for all of your assistance with this.

Kind Regards,

Emer

## **E-Mail to Teacher Who Had Not Completed Autistic Spectrum Disorder-Specific Continuing Professional Development Programme**

Dear (Teacher's Name),

I am attaching a summary of the research completed by me, which evaluated the effects of a post-graduate autistic spectrum disorder-continuing professional development programme on practice in six schools.

Prior to conducting the research in your school, I informed you that I would forward you a summary of the research findings in order to provide an opportunity for you and the other research participants in the school to respond to the findings. These responses will then be incorporated in the research.

I would be grateful if you would disseminate these findings to the research participants and provide them with my e-mail address XXXXX in order that they may respond to the attached findings, should they wish to do so. You may also give them my mobile number XXX, should they wish to contact me at any time.

I would be grateful if you could inform the research participants that I would appreciate the return of responses by Friday November 13<sup>th</sup>

Thank you once again for all of your assistance with this.

Kind Regards,  
Emer

# **An Evaluation of the Effects of a Post-Graduate Autistic Spectrum Disorder-Continuing Professional Development Programme on Practice in Six Schools**

## ***Summary of Research Findings to be Submitted***

### **Introduction**

This research was commenced in 2006 and was concerned with evaluating the effects of a post-graduate autistic spectrum disorder (ASD) continuing professional development (CPD) programme on practice in six schools. The practice in six schools where teachers had participated in the post-graduate programme was investigated in addition to the practice in four schools where teachers had not participated in the programme.

Initially an extensive literature review examined ASDs from behavioural, psychological and experiential perspectives, considered the historical development of educational provision for pupils with ASDs in the Republic of Ireland, related the concept of special educational needs to ASDs and explored ASD-specific approaches to learning and teaching. The videoing of classroom practice, photographic data and interviews yielded a range of rich data, which was analysed in order to identify valued outcomes associated with participating in the programme. The discrete elements of the CPD programme were isolated and are presented in Tables 1-7 below. The antecedent level examines factors affecting the choice and development of the programme in addition to teachers' motivation behind and reasons for choosing the particular programme. Levels One to Five, consider the appropriateness of content and process in meeting teachers' needs, cognitive, affective and behavioural learning, organisational support and change, teachers' use of new knowledge and skills and the identification of factors related to pupils' on-task behaviour. Finally additional issues that emerged during the data analysis are detailed. While each level is presented individually, levels are not mutually exclusive and significant interconnections between levels were evident. A summary of the findings is presented below and a number of recommendations for future practice based on these findings are identified.

### **Antecedent Level**

**Table 1 Antecedent Level**  
***Motivation and Reasons for Choice of Programme***  
***Prior Professional Experiences***  
***Attitudes to New Professional Challenges***

High levels of motivation, a proactive approach to new professional challenges by all ten teachers, prior professional experiences and personal biographies appeared to be influential factors that impacted on teachers' attitude to their work. The apprehension at the establishment of the class was identified as a factor in choosing to participate

in the programme for five teachers in mainstream schools where no previous provision had been in place for pupils with ASDs. This was further corroborated by principal and focus-group interview data in these schools. Deficiencies related to special education input in initial teacher education (ITE) were also identified as a factor, which prompted teachers to access the post-graduate programme. Based on the analysis of the Antecedent Level, the following should be considered:

- Publication of Guidelines to assist schools at the initial establishment of provision for pupils with ASDs.
- Exploring the possibility of increasing input on special education in ITE programmes.

### **Level One: Appropriateness of Content and Process**

**Table 2 Level One: Appropriateness of Content and Process**

*Content*  
*Process*

The content and process of the post-graduate programme was viewed positively by all teachers. Engaging with external experts, parental experiences and the views of individuals with ASDs were expressly referred to and are identified as valued outcomes of the programme. The potential of the programme as a stimulus for further learning, the enabling approach adopted by the tutors and its contribution to the creation of a learning community of discourse and practice were highlighted. The value of a practicum in developing teachers' practice was acknowledged in addition to its potential to generate stress and anxiety. The analysis of data at Level One suggests that the following should be considered:

- External experts, parental experiences and the views of individuals with ASDs are a valued outcome of participating in the programme and should be a feature of CPD programmes for teachers of pupils with ASDs.
- Communities of discourse and practice should be promoted in CPD programmes.
- The practicum should be managed in a sensitive manner that optimises learning and promotes meaningful professional dialogue between tutor and teacher.
- A directory of quality accredited and non-accredited appropriate and effective ASD-CPD should be compiled and made accessible for teachers.



## Level Two: Participants' Cognitive, Affective and Behavioural Learning

**Table 3** Level Two: Participants' Cognitive, Affective and Behavioural Learning  
*Knowledge and Understanding of Autistic Spectrum Disorders*  
*Classroom Organisation*  
*Accommodation of the Triad of Impairments*  
*Curriculum and Teaching Approaches*

A range of cognitive, affective and behavioural learning outcomes was identified from participating in the post-graduate programme. Cognitive learning was identified as the acquisition of a broad theoretical base related to a knowledge and understanding of ASDs. In contrast the knowledge and understanding of the teachers who had not completed the programme was related to their prior teaching experiences, the CPD they had accessed and individual epistemological bricolage. All teachers' acquired knowledge and understanding in relation to ASD differed in its translation to practice. Affective learning outcomes of participating in the programme were identified as stemming from engaging with parental experiences, exploring the biographies of individuals with ASDs, the potential of the programme as a stimulus for further learning and the possibilities of participating in learning communities of discourse and practice. Participation in the programme may also have contributed to teachers' high levels of motivation. Behavioural learning was evident in the manner in which teachers who had completed the programme consistently directed attention to mitigating the social deficits of the triad of impairments. No significant variation was evident between the observed behaviours of teachers who had completed the programme and those who had not in relation to classroom organisation, accommodation of the communication and rigidity and thought behaviours of the triad of impairments. curriculum implementation or the teaching approaches adopted. The analysis of data at Level Two suggests that the following should be considered:

- Accessible professional support should be available to all teachers to ensure that their knowledge and understanding of ASDs continues to translate into practice.
- Continuing professional development programmes should promote the importance of mitigating the social deficit of the triad of impairments.
- Further research should be conducted that assesses the impact of classroom organisation on the engagement and learning outcomes of pupils with ASDs.
- The role of curriculum in contributing to learning outcomes for pupils with ASDs should be further researched.
- The potential of mitigating the deficits associated with the triad of impairment through the curriculum should be researched.
- Research focused specifically on common and ASD-specific teaching approaches that can be successfully used in optimising outcomes for pupils with ASDs should be conducted.
- Developing curriculum guidelines for teachers in junior classes for pupils with ASDs.
- Developing curriculum guidelines for teachers of pupils with ASDs at second-level should be considered.

### Level Three: Organisational Support and Change

<p style="text-align: center;"><b>Table 4</b></p> <p style="text-align: center;"><b>Level Three: Organisational Support and Change</b></p> <p style="text-align: center;"><i>Organisational Support</i></p> <p><i>The Role of the Principal</i></p> <p><i>Support of Teaching Colleagues</i></p> <p><i>Multi-Disciplinary Support</i></p> <p><i>Special Needs Assistants</i></p> <p style="text-align: center;"><i>Organisational Change</i></p> <p><i>Developing Staff's Knowledge and Understanding of Autistic Spectrum Disorders</i></p> <p><i>Facilitating the Development of an Inclusive School Ethos</i></p> <p><i>Acknowledgement of Teachers' Expertise</i></p>
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The administrative, management and instructional duties of school principals, the role of teachers in mainstream classes in supporting the inclusion of pupils with ASD, the potential contribution of multi-disciplinary support and the importance of effective management of special needs assistant (SNA) support were identified as key organisational supports for ASD classes. The role of the principal featured extensively in the interview data of the six teachers who had completed the post-graduate programme. It may be that participation in the programme contributes to highlighting the importance of promoting the principal's role in the class. The important role of teachers in mainstream classes in supporting the inclusion of pupils with ASDs was identified. Teachers who had completed the programme referred more often to multi-disciplinary support and articulated the possibilities inherent in adopting a multi-disciplinary approach. This suggests that participation in the programme may provide teachers with a broad knowledge and understanding of the potential of the impact of multi-disciplinary support on pupils' educational provision. While, it is clear that the role of the SNA is valued in schools and is considered a critical organisational support, challenges in relation to the role were identified. The importance of clarification both officially and within schools in relation to the roles and responsibilities of SNAs was articulated. The need for input on the management of SNA-support at ITE, induction and CPD for teachers in the effective management of SNA-support was referred to. Considerable reference was made to the necessity of providing SNAs with CPD related to their roles and responsibilities.

The research findings suggest that a cascade effect of engaging in the post-graduate programme is identifiable in relation to the development of staff's understanding and knowledge of ASDs, facilitating the development of an inclusive school ethos and a recognition of teachers' expertise. Teachers who had completed the programme assisted in developing staff's knowledge and understanding of pupils with ASDs through input at staff meetings, informally and through direct on-site CPD for SNAs. In contrast in schools where teachers had not completed the programme, staff's knowledge and understanding was developed through the use of existing in-school expertise and external CPD providers. It is significant that in three of the four schools where teachers had not completed the programme, there were other teachers on the staff who had previously completed the programme. These teachers were explicitly

referred to as assisting the four research participants. An analysis of the data suggests that participation in the post-graduate programme can potentially contribute to facilitating an inclusive school ethos and developing other teachers' awareness of the needs of pupils with ASDs. These were at a more advanced level of development in schools where both the principal and class teacher were actively involved in the process and where structured collaborative planning and activities were a feature of practice. The specific references made by principals of teachers who had completed the post-graduate programme to the expertise in the classes suggests that participation in the programme assists in developing teachers' professional credibility in the school. The analysis of data at Level Three suggests that the following should be considered:

- There is a need for clear directions and support to assist principals at the initial establishment of a class for pupils ASDs.
- All teachers in the school should be provided with access to CPD in order to develop a knowledge and understanding of ASDs.
- Official clarification with regard to the roles and responsibilities of the SNA is required.
- The effective management of SNA-support should be a feature of initial, induction and CPD for teachers.

#### **Level Four: Participants' Use of Knowledge and Skills**

**Table 5 Level Four: Participants' Use of Knowledge and Skills**  
*Heterogeneous Needs*  
*Assessment*  
*Individualised Planning*  
*Liaising with Parents*

Level Four relates to participants' use of knowledge and skills. It was not possible to identify precisely the impact of the post-graduate programme on teachers' use of knowledge and skills. All ten teachers demonstrated an understanding of the individual needs of each pupil, the role of assessment, the need for individualised planning and the importance of liaising with parents. However it is suggested that the broad theoretical knowledge of ASDs acquired by participants in the programme may contribute positively to teachers' understanding of pupils' individual needs and their communication with parents. The in-depth knowledge of the process of individualised planning of teachers who had participated in the programme suggests that this may be a valued outcome of participating in the programme. There was a sense that all teachers would benefit further from CPD on assessment. The analysis of data at Level Four suggests that the following should be considered:

- A focus on heterogeneous needs, assessment, individualised planning and liaising with parents should be a feature of CPD programmes for teachers of pupils with ASDs.

## Level Five: On-Task Behaviour

**Table 6 Level Five: On-Task Behaviour**

The levels of on-task behaviour of pupils were not related to the CPD programme accessed by teachers but rather were related to a number of clearly identifiable elements. Direct similarities were evident between the effective management of pupils' behaviour, pupils' active engagement in meaningful learning activities, the promotion of independent learning, the use of behaviour management strategies that considered the implications of the triad of impairments and the availability and appropriate use of a wide range of learning and teaching resources. Where these elements were present, pupils' levels of on-task behaviour were high. The provision of intrinsically appealing structured learning and teaching activities in which pupils demonstrated interest was observed to significantly increase pupils' responsivity and task engagement. These activities were augmented by the use of stimulating and attractive resources. Experiential resources that utilised photographs of pupils, family members and school staff were particularly effective. A range of toys related to construction, domestic utensils and furniture, cause and effect, jigsaws and games was used successfully to engage pupils' attention. Pupils also demonstrated high levels of interest in selected puppets, dolls and soft toys. Information and communication technology and video were effective when carefully selected in accordance with pupils' identified levels of interest and ability. Strategies for the management of pupils' behaviour that considered the implications of the triad of impairments included the use of a clear and reduced language of instruction, supported the pupil in understanding the rules of social behaviour, used visual material and/or signing and signalled transitions and changes in routine were observed to be particularly effective.

A high degree of similarity was evident between the effective management of pupils' behaviour and classroom organisation, consideration of the visual learning modality of pupils' with ASDs, the implications of the sensory and perceptual sensitivities of pupils' with ASDs, the use of a range of teaching approaches and strategies and the effective management of SNA-support. Where a variety of teaching approaches and strategies was used in response to pupils' levels of task engagement, pupils' on-task behavior was observed to increase. Elements of ASD-specific approaches were observed and included the Picture Exchange Communication System, the Treatment and Education of Autistic and related Communication-handicapped CHildren, intensive interaction and applied behaviour analysis. The use of songs and rhymes appeared to promote on-task engagement and assist pupils' learning. Attention to the purposeful manipulation of the learning and teaching environment created a predictable and secure milieu, which seemed to impact positively on pupil's on-task behaviour. Pupils responded favourably to a low-stimulus environment in which visual and auditory stimuli were adjusted and where classroom areas were clearly delineated. Pupils' on-task behaviour was compromised where materials were not stored in an organised manner and the potential for distracters such as toys, books, objects of interest and objects with which pupils demonstrated a tendency to engage in perserverative behaviours were not sufficiently considered. The sensitive management of SNA-support contributed positively to pupils' on-task behaviour. Features of this management approach included facilitating pupils in engaging in

tasks independently, employing a clear and reduced language of instruction and providing assistance only when necessary. Positioning of SNAs in an unobtrusive manner behind, and at a distance from pupils was observed to impact positively on pupils' task engagement. Where SNA-support was overly directive, it was observed to impact negatively on pupils' on-task behaviour and the development of pupils' independent learning skills. The analysis of data at Level Five suggests that the following should be considered:

- A repertoire of strategies is required to promote pupils' on-task behaviour.
- Further research is necessary in order to isolate the relative contribution of the distinctive elements identified above to pupils' on-task engagement.

### **Additional Emerging Issues**

<p><b>Table 7 Additional Emerging Issues</b></p> <p><i>Teacher Articulation</i></p> <p><i>Music</i></p> <p><i>Autistic Spectrum Disorder-Specific Approaches</i></p> <p><i>Litigation and the Media</i></p> <p><i>Special Education Support Service</i></p> <p><i>Probation</i></p> <p><i>Pupil and Sibling Awareness</i></p> <p><i>Extending the Availability of Continuing Professional Development</i></p>
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A range of issues emerged in the data analysis, which while not directly related to the research question, was relevant to the research focus. These issues related to Teacher Articulation, Litigation and the Media, The Special Education Support Service, Probation, Pupil and Sibling Awareness and Extending the Availability of Continuing Professional Development. Music and ASD-Specific Approaches also emerged in two selective codes, which were combined with the analysis at Level Two. Teacher articulation emerged as a theme for those teachers who had completed the post-graduate programme. While two teachers were very adept at describing their practice and approach, four teachers' descriptions did not match the video-data observed. This was particularly evident in relation to details of the curriculum being implemented and the approaches to learning and teaching being adopted. All teachers referred to ASD-specific approaches but required probing in order to acknowledge the role of generic methodologies such as direct teaching, teacher-modelling, task analysis, active learning and discovery learning in their practice.

All ten teachers referred to litigation and three teachers specifically referred to the media. Nine teachers stated that they were conscious of the possibility of litigation, which particularly influenced the way they planned for, monitored and recorded pupils' progress. Two teachers who had completed the post-graduate programme expressly related parental satisfaction to worrying less about the threat of litigation. One teacher who had completed the programme stated that the possibility of litigation did not impact on her. Three teachers expressed concern with regard to the inaccurate portrayal of school-based provision for pupils with ASDs in the media and

the failure to capture the complexity and heterogeneous nature of ASDs. All principals in schools where teachers had completed the post-graduate programme referred to litigation and three principals in schools where teachers had not completed the programme referred to litigation. Principals noted that they were particularly conscious of this in the management of pupils' care needs and in providing an appropriate education for pupils. Three principals in schools where teachers had not completed the programme had direct experience of litigation. Two principals in schools where teachers had completed the post-graduate programme and two principals in schools where teachers had not completed the programme referred to the reporting of ASDs in the media. One principal noted that the effect caused one to question one's own practice and the other principal noted the role of misrepresentation in the media. Another principal referred to the school's experience of the reluctance of the media to report on pupils' success in school-based provision.

All teachers affirmed the CPD they had received from the Special Education Support Service (SESS). The availability of support and the opportunity to renew one's enthusiasm and consolidate existing knowledge were commended. The positive impact of CPD through the SESS for two probationary teachers was referred to. The availability of support from the SESS for whole-staff CPD was particularly affirmed. One teacher criticised a conference organised by the SESS as being too theoretical, repetitious and lacking in practical activities. Another teacher referred to the same conference as "*overwhelming*" for a teacher colleague who had just taken up a position teaching pupils with ASDs. All principals affirmed the establishment of the SESS. Two principals referred positively to the advice that they had received through the phone-support. Eight principals commended the greater availability of CPD for teachers that was available through the SESS. The provision of in-school whole-staff CPD by three visiting experts and two practitioners was affirmed by five principals. One principal advised that the SESS should contact the schools in a more proactive manner rather than schools waiting to be contacted by the SESS. It is important to state that as part of my role with the Department of Education and Science, I provide professional advice to the SESS and teachers would therefore be aware of my close association with the service. This may have influenced research participants in their comments related to the SESS. However this finding also reflects recently conducted reviews of research, which suggests that short well-organised workshops on research-based topics that are relevant to teachers should not be dismissed.

Two of the teachers who had not completed the post-graduate programme were in their probationary year. Both teachers and principals in these schools were satisfied that it was possible to be probated in these teaching positions. However both referred to the time required to meet the planning requirements of the probationary process, provide appropriate resources for the pupils' learning and teaching and engage in CPD related to the learning and teaching of pupils with ASDs. In one of the schools, the principal had put a mentoring programme in place for the teacher.

The principal of one of the schools where the teacher had not completed the post-graduate programme described the self-knowledge of post-primary pupils with ASDs as contributing positively to their school placements. The principal attributed this approach to the Health Service Executive psychological service and viewed it as a positive mechanism to enable pupils to cope in schools in addition to promoting the

understanding of other pupils. The principal also described a sibling programme that was in place in the school for all siblings of pupils in the school.

All of the focus group participants who were teaching in mainstream schools where teachers had completed the post-graduate programme articulated a need for CPD for mainstream teachers in the area of ASDs. The challenges for class teachers in managing inclusion in classes where there are pupils who have poor literacy skills and pupils with a range of special educational needs were referred to. The possibility of both class teachers and learning support teachers having pupils with Asperger's syndrome in their classrooms without the requisite knowledge and understanding was identified. Providing principals with access to CPD in this area that enhances their management and instructional roles in relation to the class was also suggested. It is to be noted that where principals had accessed ASD-specific CPD, it was observed to impact positively on these roles. The need to extend the availability of CPD for class teachers, learning support teachers and principals is commensurate with the findings at Level Three above. The analysis of data related to Additional Emerging Issues suggests that the following should be considered:

- Ensuring CPD programmes provide opportunities for teachers to articulate their practice and connect it to ITE programmes and their prior experiences of teaching rather than viewing it as a separate entity linked specifically to the CPD programme that they have undertaken.
- Guidelines with regard to the management of special education litigation should issue from management bodies, in order to assist in alleviating the stress caused for schools both by the threat of litigation and reporting in the media.
- The SESS should continue to provide CPD for teachers.
- Additional support in relation to planning, recording and monitoring pupils' learning and accessing relevant programmes of CPD is required for teachers of pupils with ASDs who are on probation.
- Developing programmes of awareness in relation to ASDs as an element of the Social, Personal and Health Education curriculum should be considered in consultation with parents/carers and with the pupils themselves. This is an area that programmes of CPD might also refer participants to. Siblings of pupils with ASDs should have access to support groups that enable them to connect with peers who are having similar experiences.