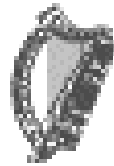# An Evaluation of Educational Provision for Children with Autistic Spectrum Disorders

A Report by the Inspectorate of the Department of Education and Science 2006

An Evaluation of Educational Provision for Children with Autistic Spectrum Disorders

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DEPARTMENT OF
EDUCATION
AND SCIENCE

INSPECTORATE

contents

Significant developments have occurred since the Government announcement in 1998 that children with autism would be recognised as a distinct group for special educational provision. Prior to 1998, children with autism were usually defined by some other accompanying condition, such as general learning disability, behavioural disorder, or speech and language impairment, and they tended to be referred to and enrolled in special schools for these disabilities. Since the decision in 1998 there has been a significant growth in 'autism-specific' educational provision, and special education for these children is now provided in mainstream classes, special classes, special schools, and special centres for education. Other developments since 1998 include the publication of the Report of the Task Force on Autism and, in a North-South collaboration, the production of a video and CD-Rom on autism for parents and professionals.

This Inspectorate report describes an evaluation of the education that is provided for children with autism spectrum disorders (ASDs) in a variety of settings throughout the country. Five categories of educational provision were evaluated by the Inspectorate of the Department of Education and Science over a two-year period. The evaluation was not intended as a comparative one but as an attempt to review the range of provision that is made, to identify good practice in different settings, and to affirm the efforts made by all staff in providing for pupils with ASDs. Each setting received an individual written report, in keeping with the usual practice of the Inspectorate, except in the case of settings where provision for individual children was the focus of evaluation. In these latter cases, an oral report was provided.

Schools and centres were selected for evaluation to reflect the range of current educational provision available. The sample of settings included centres in which applied behaviour analysis (ABA) approaches are exclusively or largely implemented, ASD-dedicated special schools and other special schools, ASD-dedicated special classes in mainstream schools, and mainstream classes supporting individual pupils with ASDs. Evaluation instruments were developed based on the findings of an extensive literature review. These instruments included questionnaires for parents, school principals, directors of centres, and staff members. Document review and evaluation schedules were also developed and were used by the inspectors during the evaluation process. The inspectors involved in the evaluation had qualifications in special education and in autism, and had also completed courses in different approaches to teaching pupils with autism. The evaluation generated a significant amount of both quantitative and qualitative data, and the outcomes of the data analysis and of the literature review are presented in this report in a thematic format.

The main findings demonstrate particular strengths and aspects for development within the different settings of educational provision. While there are some clear differences between the different settings, there are many commonalities as well. The satisfaction level of parents with the educational provision that is made for

their children is particularly high. The elements of good practice identified during the evaluation process and in the literature review form the basis for the report's recommendations. It is hoped that they will make a positive contribution to policy development and to continuing improvement in the quality of education that is available to children with ASDs.

I wish to thank the principals of the schools and directors of the centres and their respective staffs, and the parents of the children for their co-operation with the evaluation.

I hope that the readers of this report will find its contents of benefit, and that it will motivate all who are involved in this area of education to renew their efforts in making provision of the highest quality available to children with autistic spectrum disorders.

Eamon Stack
Chief Inspector

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Acknowledgements

Chapter 1 INTRODUCTION

Chapter 1   Introduction

1.1   Autistic spectrum disorders

In accordance with the practice adopted by the Task Force on Autism (Department of Education and Science, 2001a), the term autistic spectrum disorders (ASDs) is used in this evaluation report to denote disorders exhibited by children with autistic disorder, children with Asperger's syndrome (AS), and children with pervasive developmental disorder not otherwise specified (PDD-NOS). 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), are the two main classification systems used in making initial diagnoses of ASDs (World Health Organisation, 1994; American Psychiatric Association, 2000). The two 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. (See appendix 1).

1.1.1   Characteristics of children with autistic spectrum disorders and their special educational needs

According to the Task Force on Autism, children with ASDs exhibit qualitative impairments in reciprocal social interaction and in patterns of communication and demonstrate restricted, stereotyped and repetitive repertoires of interests and activities (Department of Education and Science, 2001a). These characteristics correspond to the triad of social interaction, communication and imagination impairments identified by Wing and Gould in 1979. It has been suggested that an additional dimension related to sensory perception might also be added to the triad (Autism Working Group, 2002a; Jones, 2002). The presence of these characteristics affects the manner in which children with ASDs interact with and understand the world.

Social impairments include an apparent 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 affect relationships with others and significantly affect the manner in which individuals with ASDs arrive at an understanding of themselves and of the world around them (Jordan, 2005). Children with ASDs will therefore require direct teaching of social signals and conventions, such as responding to their name as an attention-alerting signal, turn-taking skills, the timing and dynamics of social interactions, the concept of sharing, the capacity to classify and respond to pertinent information, and the modulating of levels of arousal (Jordan, 2005).

Communicative impairments are characterised by an absence of meaningful communicative intent, 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 (Baron-Cohen and Bolton, 1993; Jordan and Powell, 1995). Jordan (1996) observes that ASDs are the only conditions where communication is separate from language in its development. Children with ASDs need to be directly taught the purpose of communication and the variety of ways in which we communicate, such as gestures, eye signalling, facial expression, and body posture (Jordan, 2005). The teaching of conversational skills related to turn-taking, active listening, topic introduction, maintenance and change will also form a central part of children's

education programmes (Jordan, 2005). The literal understanding of children with ASDs presents particular difficulties, and a clear and unambiguous language of instruction is required in all learning and teaching situations.

Children with ASDs exhibit rigid thought and behaviour patterns, which may lead to obsessional behaviour, repetitive interests, and ritualistic play (Beyer and Gammeltoft, 2000). Sherratt and Peter (2002) observe that children with ASDs seem to lack the urge to engage spontaneously in playful behaviour and describe the rigidity of thought and behaviour as the antithesis of creativity. An education programme for children with ASDs will need to include structured and purposeful opportunities for them to develop creativity and imagination in order to provide a holistic and child-centred approach to learning and teaching (Sherratt and Peter, 2002).

Sensory and perceptual impairments can lead to an undersensitivity or oversensitivity to noise, smell, taste, light, touch, or movement, fine and gross motor difficulties, poor organisational skills, and difficulties in managing the time and sequence of activities (Autism Working Group, 2002a; Jordan, 2001). Engaging in a risk assessment that systematically addresses the sensory and perceptual sensitivities of children with ASDs in relation to lighting, acoustic levels, heating and ventilation systems, classroom displays and colouring assists in creating a supportive learning environment for children with ASDs. The use of clear directional signs indicating specific areas of activity and the consistent use of visual timetables and work systems assists in pre-empting the anxiety children with ASDs experience with the abstract and temporal nature of time (Mesibov and Howley, 2003).

The atypical sleep and behaviour patterns experienced by some children with ASDs need to be consistently assessed and monitored in order to establish their impact on the children's learning and teaching programmes (Autism Working Group, 2002a).

1.1.2 **Additional special educational needs arising from general learning disability**
The behavioural and psychological characteristics associated with an assessment of ASDs result in children exhibiting a style of thinking and learning that is clearly distinct from that of children who do not have ASDs. Cumine, Leach and Stevenson (2000) observe that while children with ASDs have features in common they have diverse individual profiles that necessitate an individualised approach to meeting their needs.

The Report of the Special Education Review Committee (SERC Report) (Ireland, 1993) states that some seventy-five per cent of children with ASDs are within the range of general learning disability in intelligence tests, and Peeters (1997) observes that sixty per cent of people with ASDs register with an intelligence quotient (IQ) below fifty. It is acknowledged that, because of the nature of ASDs, it is difficult to secure a valid cognitive assessment of a child's particular level of cognitive functioning (Department of Education and Science, 2001a). 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 (Autism Working Group, 2002b; Jordan, 2001; Peeters, 1997).

The SERC Report outlines the special educational needs of children associated with an assessment of mild, moderate or severe to profound general learning disability (Ireland, 1993). To the extent that IQ may be used as an indicator of intelligence, children with a mild general learning disability are described as having an IQ in the range of fifty to seventy on intelligence tests. Such children experience delayed conceptual development, slow speech and language development, limited ability to abstract and generalise, a 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.

Children with a moderate general learning disability are described as having an IQ in the range of thirty-five to fifty on intelligence tests. The special educational needs associated with a moderate general learning disability include 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.

On intelligence tests, children with a severe general learning disability are described as having an IQ in the range of twenty to thirty-five and children with a profound general learning disability as having an IQ below twenty. Children with a severe to profound general learning disability are 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 children's 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 National Council for Curriculum and Assessment has recently published a series of draft guidelines to assist schools in meeting the needs of pupils with mild, moderate and severe to profound general learning disabilities (National Council for Curriculum and Assessment, 2002). These guidelines are designed to be used in association with the Primary School Curriculum in order to promote access to the curriculum through acknowledging and accommodating the special educational needs arising from pupils' particular levels of general learning disability, as outlined in the SERC Report.

A learning and teaching programme for children with ASDs should therefore accommodate both the special educational needs of children that arise from an assessment of ASDs and the associated impact of a general learning disability (Jordan, 2001).

1.2   **Provision in Ireland**
For the greater part of the twentieth century no distinct or separate provision was made in the Irish education system for children with ASDs. Such children 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. Some children were also enrolled in special or ordinary classes in mainstream schools.

The SERC Report advocated that, where such enrolment was considered to be the most appropriate, children 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 (Ireland, 1993). It was further recommended that a teacher be sanctioned in respect of every six pupils with ASDs, and that additional teaching support be made available to pupils with ASDs enrolled in ordinary schools. The report proposed that account be taken of such factors as the pervasiveness and degree of severity of the autistic symptoms, the level of intelligence and the level of language development when the most suitable educational placement for children with ASDs was being considered.

In a Government press statement on 5 November 1998 the Minister for Education and Science, Mícheál Martin TD, introduced the concept of automatic entitlement to support children with special educational needs, irrespective of their geographical location or general learning disability (Department of Education and Science, 1998). Formal recognition was expressly given to the distinct educational needs of all children with ASDs, and it was announced that separate provision would be made for children with ASDs by means of a pupil-teacher ratio of 6:1 and with the support of a child care assistant. Circular 8/99 further described 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 (Department of Education and Science, 1999a). Children with ASDs were given express recognition in this circular in the form of entitlement to additional teaching support based on a pupil-teacher ratio of 6:1. Subsequent circulars continue to acknowledge this level of support and entitlement (Department of Education and Science, 2002b, 2003, 2004, 2005a, 2005b).

The Minister for Education and Science, Dr Michael Woods TD, launched the Task Force on Autism in October 2000. Its terms of reference included reviewing the existing range of educational provision and the support services available to children with ASDs, assessing the adequacy of educational provision and services, having regard to the heterogeneous needs of children, considering the requirement for an associated range of provision, and making recommendations to ensure the provision of an appropriate, effective and efficient service to children with ASDs. The task force published its report in 2001 and made a series of recommendations in relation to policy and practice concerning educational approaches to meeting the needs of children with ASDs (Department of Education and Science, 2001a). The Department of Education and Science continues to develop policy and practice with reference to these recommendations.

Current educational provision for children with ASDs is made in a range of schools and settings, which include dedicated special schools for children with ASDs, special classes in special schools for children with general learning disabilities, ordinary classes in special schools for children 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, and centres in which applied behaviour analysis (ABA) approaches are exclusively or largely implemented. According to recent data there are 107 special schools for children with general learning disabilities in which children with ASDs are included, 73 special classes for children with ASDs in special schools for children with general learning disabilities, 88 special classes for children with ASDs in mainstream primary schools, including 5 classes for children with Asperger's syndrome, 1500 children with ASDs enrolled in mainstream primary

schools, and 11 centres in which ABA is exclusively or largely implemented. The Department of Education and Science is also implementing an early education service for children with ASDs, which at present includes 11 classes attached to mainstream primary schools and 1 special school. Children with ASDs may enrol in this early education service from the age of three.

1.3 **Evaluation of educational provision for children with autistic spectrum disorders**
Five categories of educational provision for children with ASDs were evaluated by the Inspectorate of the Department of Education and Science over the two-year period 2002–04.

The evaluation of learning and teaching in the selected schools and centres was based on the model of school inspection that existed in the period 2002–04. This model comprised a pre-evaluation meeting with staff members, a meeting with the chairperson of the board of management or equivalent in centres, evaluation of learning and teaching, a detailed review of documents related to policy, planning, individualised planning and children's relevant professional reports, and a post-evaluation meeting at which a draft copy of the report of the Inspectorate was discussed. Finally, a report was issued to each school or centre. While individual reports were not issued in respect of individual children included in eight mainstream schools, the findings of the evaluations were discussed with members of the school staff at post-evaluation meetings.

In accordance with the evaluative and reporting function of the Inspectorate, as laid down by section 13 of the Education Act (1998) and the Professional Code of Practice for the Inspectorate, the aims of the evaluation were to identify, acknowledge and affirm good practice, promote continuing improvement in the quality of education for children with ASDs, promote self-evaluation and continuous development by schools and staff members, provide an assurance of quality with regard to educational provision for children with ASDs, and contribute to future policy development (Department of Education and Science, 2001b; Ireland, 1998).

This final composite report is presented with reference to the aims of the evaluation and describes the evaluation methodology, presents a literature review identifying the development of a variety of approaches to the learning and teaching of children with ASDs, describes the outcome of the evaluation, and makes recommendations for the future development of policy and practice.

Chapter 2   Evaluation Methodology

2.1   Evaluation model

The evaluation of educational provision for children with autistic spectrum disorders (ASDs) was conducted by inspectors with particular qualifications and expertise in the learning and teaching of children with special educational needs and of children with ASDs. Before engaging in the evaluation process, the evaluation team conducted an extensive review of the literature to identify the optimal components of an educational provision that effectively meets the learning and teaching needs of children with ASDs.

Evaluation instruments were developed in accordance with the findings of the literature review. These included questionnaires for parents, school principals, directors of centres, and staff members. Document review and evaluation schedules were also developed and were used by the inspectors during the evaluation process. The Evaluation Support and Research Unit of the Inspectorate assisted the evaluation team in devising and distributing questionnaires and in the subsequent compilation of questionnaire data.

Schools and centres were selected to reflect the range of educational provision available for children with ASDs. The evaluation was confined to children of primary-school age. Educational provision for pupils with ASDs in mainstream second-level schools and for those availing of the Home Tuition Scheme was not included.

The evaluation model employed consisted of three strands:

Strand 1 The collection of data in respect of schools and centres, staff members, children with ASDs enrolled in schools or centres, and the availability of support services for schools and centres.

Strand 2 The evaluation of educational provision for children with ASDs in a sample of schools and centres.

Strand 3 The completion by parents, school principals, directors of centres, teachers and tutors of questionnaires related to educational provision for children with ASDs.

2.2   Phases of evaluation

The evaluation model was implemented in five consecutive phases in accordance with the range of educational provision being evaluated.

Phase 1 Evaluation of educational provision in four centres in which applied behaviour analysis (ABA) approaches are exclusively or largely implemented.

Phase 2 Evaluation of educational provision in two dedicated special schools for children with ASDs.

Phase 3 Evaluation of educational provision in three special schools for children within the mild, moderate and severe to profound range of general learning disability, respectively.

Phase 4 Evaluation of educational provision in ten special classes for children with ASDs in seven mainstream primary schools.

Phase 5 Evaluation of educational provision for individual children with ASDs in ordinary classes in eight mainstream primary schools.

Appendix 2 provides details of the schools and centres that participated in the evaluation.

2.3   **Analysis of data**

The evaluation process generated a significant amount of both quantitative and qualitative data. Data were analysed in accordance with the principles of qualitative analysis, and a quantitative reporting component was also used to present the findings of the evaluation. Table 1 shows the qualitative terms employed in reporting the quantitative equivalents in the report. The outcome of the evaluation is presented in a thematic format that reflects the themes that emerged from the direct analysis of the data and the literature review.

TABLE 1: SCALING MECHANISMS USED IN THE REPORT	
Almost all	More than 90%
Most	75–90%
The majority	50–74%
Some	15–49%
A few	Up to 15%

Chapter 3   Literature Review

3.1   **Introduction**

The Primary School Curriculum and the Draft Curriculum Guidelines for Teachers of Students with General Learning Disabilities are both designed 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 (National Council for Curriculum and Assessment, 1999, 2002). The challenge for programmes of education for all children, including those with autistic spectrum disorders (ASDs), lies in providing learning and teaching experiences that enable the children to become socially adapted and productive citizens while simultaneously developing each child's individual identity and potential. Through examining a selection of specific approaches to the learning and teaching of children with ASDs, the literature review aimed to identify elements of good practice and the implications for future policy formation.

3.2   **Intrinsic methodological difficulties**

It is important to point out that the heterogeneous nature of the needs and abilities of children with special educational needs renders matching on age, sex and intelligence quotient (IQ) difficult and limits the potential for comparisons between different research projects (Schindele, 1985). Much of the research is characterised by opportunistic and pragmatic sampling procedures, which further limit its generalisability. The intensity, frequency and duration of interventions are not readily ascertainable, and therefore their effect on the outcome of research cannot be precisely determined.

The implications of a dual diagnosis of ASD and general learning disability are not always made clear in research studies. This presents a difficulty when research findings are being interpreted, as it is essential to acknowledge the implications of both ASD and a general learning disability when a learning and teaching programme is being devised for a child with ASD (Jordan, 2001).

While so far there has been no cure in a clinical sense for ASDs, it is accepted that children with ASDs can benefit from specific behavioural and educational interventions that take cognisance of the implications of ASDs for the children's learning and teaching programmes (Gresham and McMillan, 1997).

3.3   **Specific approaches to the learning and teaching of children with autistic spectrum disorders**

A selection of one of each of the most common categories of approaches is examined and evidence of their effectiveness evaluated in accordance with the findings of published research. (See table 2.)

TABLE 2: ASD-SPECIFIC APPROACHES				
Interactive approaches	Communicative approaches	Integration approaches	Behavioural approaches	Discrete approaches
Intensive interaction	Total communication approach	LEAP programme	Lovaas programme	TEACCH

3.3.1 **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" (Jordan and Jones, 1999, p. 103).

Interactive approaches concentrate on developing the social and communication tendencies of children with ASDs and seek to enable them to initiate communicative acts for their own social ends. A remediation approach rather than a compensatory approach to addressing the triad of impairments is adopted (Nind, 1999).

Intensive interaction

Nind (1999) describes intensive interaction as an approach to teaching individuals with learning difficulties that is aimed at "facilitating the development of the most fundamental social and communication abilities" (Nind. 199, p. 96).

The approach is based on naturalistic processes and developmental principles (Kellett and Nind, 2003; Nind, 2001). Fig. 1 illustrates the significant processes in caregiver-infant interaction that are used in the process of intensive interaction.
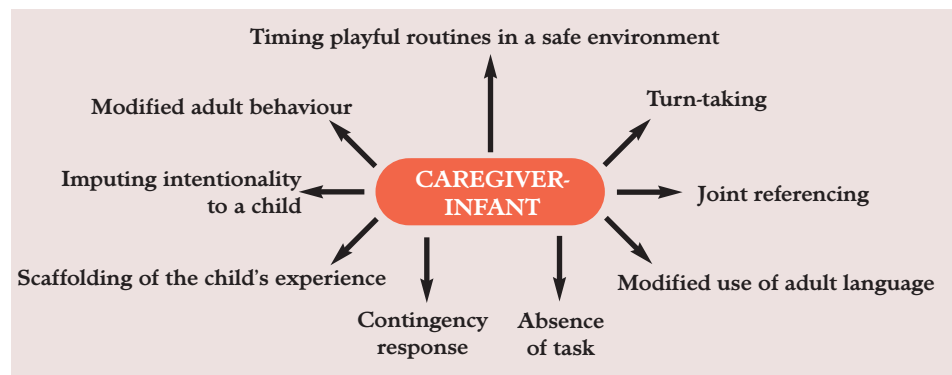
Fig. 1: Processes in the caregiver-infant dyad utilised in intensive interaction

The teacher is required to adjust his or her interpersonal behaviour in accordance with feedback from the learner. 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). The emphasis on learning communication and sociability in naturalistic and incidental settings may assist in mitigating the difficulties children with ASDs exhibit in generalising learnt skills to real-life situations.

An examination of a number of case studies suggests that participation in interactive approaches can effect progress in children's social and communicative abilities (Kaufman, 1976, 1994; Nind, 1999). However, Jordan, Jones and Murray (1998) observe that research on the effectiveness of interactive approaches is largely based on small case studies and anecdotal evidence. The Clinical Practice Guidelines published by the New York State Department of Health concluded that there was no adequate scientific evidence that an intervention based on an interactive approach developed by Greenspan and Wieder (1997) demonstrates effectiveness as an exclusive intervention for young children with ASDs (New York State Department of Health, 1999).

It is clear that aspects of interactive approaches are consistent with desirable components in educational provision for children with ASDs. These aspects include the importance of a child-specific assessment, individualising the intervention according to each individual's strengths and needs, involving the family in the intervention, the possibilities for promoting imitative play and affective engagement, the importance of staff training, and the need for comprehensive record-keeping. However, the exclusive use of intensive interaction as an educational approach for children with ASDs is unsustainable until there is further research that uses a range of objective measures and adequate control groups.

3.3.2   **Communicative approaches**
Communicative approaches are designed specifically to promote and develop the individual's communication skills. Prizant (1996) points out that fifty per cent of children with ASDs fail to develop speech as a primary means of communication. Therefore the need to provide these children with alternative means of communication is essential.

A total communication approach
Recent research by Potter and Whittaker (2001) that analysed the spontaneous communication of eighteen young children with ASDs concluded that the communication of children with ASDs can be significantly enhanced through the skilful use of an integrated range of strategies and approaches. Potter and Whittaker further emphasised the importance of adopting a capacity approach, concentrating on children's strengths and abilities in the areas of communication and social development. Table 3 provides a summary of two possible components of a total communication approach.

TABLE 3: TWO POSSIBLE COMPONENTS OF A TOTAL COMMUNICATION APPROACH
PICTURE EXCHANGE COMMUNICATION SYSTEM (PECS) (BAKER, 2001; BONDY AND FROST, 2002).
A structured picture-based system to enable the development of early communication skills, first developed in the United States for pre-school children with ASDs. It uses principles from applied behavioural analysis in a functional manner that seeks to develop and extend communication, which is initiated by the child without the dependence of adult prompts. A reinforcer assessment that identifies what the child usually requires from adults precedes the implementation of a PECS programme. Picture symbols are created from the reinforcers, and the printed word is placed underneath the picture from the start.
AUGMENTATIVE COMMUNICATION (JORDAN, 1985; JORDAN AND POWELL, 1995; JORDAN, JONES AND MURRAY, 1998)
The use of augmentative systems of communication such as sign, pictures, symbols and written words to assist the learning and communication of children with ASDs, regardless of the level of speech.   The iconic nature of signs is compatible with the predominantly visual learning channel of children with ASDs.

Jordan, Jones and Murray (1998) point out that the picture exchange communication system (PECS) involves the use of pictures in a distinctive manner that starts with requesting, not labelling, requires interaction with others, and encourages the child to initiate communication rather than responding to a prompt. The use of visual symbols acknowledges the strong visual learning modality of those with ASDs (Lawson, 2002).

Peeters (1997) cautions against using sign language as an alternative means of communication for those 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 meaning. However, research conducted by Seal and Bonvillian (1997) suggests that the use of sign language with some children with ASDs effectively enhances their communicative skills. Jordan, Jones and Murray (1998) point out that most practitioners adopt a "total communication" approach, where speech and signs are used in parallel and the purpose of signing as a means of communication is made clear to the children. 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.

It is evident, in the light of the available research, that the establishment of a high-quality communicative-enabling environment that acknowledges the learning style of children with ASDs and promotes and develops their communication skills is a critical element of an education programme for such children.

3.3.3 Integration approaches

Integration approaches use integration as the learning medium, and children are directly taught to participate in activities with their normally developing peers.

Learning experiences and alternative programme for pre-schoolers and their parents (LEAP)

The LEAP method has three components: an integrated pre-school, 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 children (ten typically developing children and six children with ASDs) aged between three and five.

The curriculum consists of a blend of typical pre-school 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 (1986) 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 throughout the school, home and community environments and are planned, systematic, and individualised. The curriculum reflects a behavioural and 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 continue to conduct research into the variables that contribute to differential outcomes.

Integration approaches specifically address the impairment of social interaction and communication associated with an assessment of ASDs. However, research studies suggest that direct teaching of identified skills must occur in the integrated settings and that the mere exposure of children to each other is not sufficient (Jordan, Jones and Murray, 1998). While interactions occur in naturalistic settings, behavioural techniques are applied to improve the child's social initiations and appropriate responses (New York State Department of Health, 1999). It is clear from the research examined that integration approaches require staff training and systematic planning to make them effective.

3.3.4   **Behavioural approaches**
Behavioural approaches originate from Skinner's work in the 1950s in modifying the behaviour of animals and have been widely used to meet the needs of children with ASDs (Howlin, 2001).

The Lovaas programme
This scheme was developed by Dr Ivar Lovaas to demonstrate the effectiveness of early intensive behavioural intervention (EIBI) in improving the prognosis of children with ASDs (Degli Espinosa, 2001).

> 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, 1981, p. x).

The Lovaas method is based on the principle of operant conditioning; the operation of this principle is described as behaviour modification or applied behaviour analysis (ABA).

Children are engaged in the programme for approximately forty hours per week, with the desired outcome described as the achievement of full integration in a mainstream classroom (Degli Espinosa, 2001). The behavioural techniques of reinforcement, shaping, prompt and prompt-fading underpin the programme (Lovaas and Smith, 1989). Each child has access to an individualised programme, which includes the development of self-help, play, language, and academic skills (Degli Espinosa, 2001). Parents receive training and are encouraged to maintain the programme outside the forty hours specifically devoted to it (Connor, 1998).

Connor (1998) cites the opinion of Rimland (1994) that the operant training and the teaching of specific behaviours succeed in directing and focusing the child's attention, and the provision of immediate motivation enables the child to progress through a series of selected behavioural steps that teach specific skills and enables the child to learn. The direct focus of the approach reduces the multiple cues in the environment that inhibit the learning of a child with ASD because of their inability to respond to a range of cues at once (Connor, 1998). The teaching of new behaviour to the child is thus characterised by a clarity and directedness, which takes nothing for granted and reduces the chance that overselectivity will occur. Behavioural approaches have been shown to affect language acquisition, to suppress aggression and self-stimulatory behaviour, and to have a positive influence on children's general development (Lovaas, 1981, 1987; McEachin, Smith and Lovaas, 1993).

Research studies by Lovaas (1987), McEachin, Smith and Lovaas (1993), Birnbrauer and Leach (1993) and Smith et al. (1987) suggest that children who received

intensive behavioural interventions demonstrated greater improvements than those in the control groups, who received less behavioural intervention, another type of intervention, or no intervention. However, in each of these studies the behavioural interventions were part of a programme that included specific curriculum content, intense interventions, parental involvement, and highly structured and systematic record-keeping and assessment. It is important to note that, in general, children with higher levels of intellectual functioning demonstrated better outcomes, and that none of these studies used the random assignment of children to groups.

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 of Health, 1999). The evidence suggests that ABA employs successful teaching principles, such as that learning occurs in discrete and measurable segments, that rewards 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 is based are not all-encompassing principles of human behaviour, learning, or development (Connor, 1998; McGee et al., 1987; Mesibov, 1993;). Recently Shea (2004) examined the research literature on EIBI and concluded that the expectation that forty-seven per cent of participants who receive EIBI will reach normal developmental status is erroneous. Shea concludes that the consensus of the professional literature is that a variety of educational and therapeutic techniques assists children with ASDs at all levels of functioning to develop skills, interests, and relationships.

3.3.5 **Discrete approaches**
A number of discrete approaches have been developed that purport to provide a comprehensive approach to the learning and teaching of children with ASDs. One such is the Treatment and Education of Autistic and related Communication-handicapped Children (TEACCH), used in the United States for children and adults with ASDs and communication disabilities (Jordan, Jones and Murray, 1998).

TEACCH
The rationale for the approach adopted by TEACCH is based on research that found that children with ASDs progressed better in a structured than in an unstructured environment (Schopler et al., 1971; Schopler, Mesibov and Hearsey, 1995). 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 and cognitive and behavioural patterns of individuals with ASDs informs the learning programme (Haramaki et al., 2001).

The four main components of structured teaching are described as: a physical organisation of the environment that enables children to understand the concept of where activities and functions take place; schedules that accommodate the children's difficulties with the concept of when and what the activity will be; work systems that inform children what to do while in their independent work area, and task organisation that provides visually clear guidelines on the positional relationship between parts of the task and its completion (Schopler, Mesibov and Hearsey, 1995). Directions, prompts and reinforcers are used as part of the children's learning programme, which concentrate 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. TEACCH has been reported to be successful in neutralising ASDs deficits, preventing behaviour problems, and promoting independence (Schopler, Mesibov and Hearsey, 1995).

In a recent case-based evaluation of TEACCH methods with eleven pre-school children, gains were reported on a wide range of motor, perceptual and cognitive processes for all the children (Sheehy, 2001). However, Jordan, Jones and Murray (1998) remark that while TEACCH is one of the longer-established methods, there is still an absence of systematic research into outcomes of the method. They suggest that there is a need for larger studies and the use of control groups and of evaluators who are blind to the purpose of the study and the status of the participants before intervention.

The use of focused assessment procedures, a structured environment, visual schedules and work systems is commensurate with the learning and teaching strengths and needs of children with ASDs. Elements of behavioural strategies that have been successfully employed with individuals with ASDs are evident in the use of directions, prompts, and reinforcers. These features of the TEACCH method suggest that it may be used in implementing education programmes for children with ASDs.

3.3.6   Conclusion

A wide variety of specific approaches to the learning and teaching of children with ASDs has been developed. Jordan, Jones and Murray (1998) examined a range of these approaches and concluded that

> most approaches had some evidence of the effectiveness of what they did in terms of outcome, but this was extremely variable in quality in scientific terms... No approach has yet been entirely successful in producing a methodologically sound evaluation of its work... (Jordan, Jones and Murray, 1998, p.119).

The findings of the Report of the Task Force on Autism similarly concluded that there was no definitive evidence to support a particular intervention for all those with ASDs (Department of Education and Science, 2001a).

Heflin and Simpson (1998) reviewed the most frequently used ASD interventions and concluded that there is no single method that should be used exclusively to meet the varied needs of children and young people with ASDs and their families. The authors suggested that the most effective methods were those that incorporated a variety of best practices. It is clear that elements of the approaches reviewed may be equated with best practice in addressing individual children's behavioural and psychological deficits stemming from an assessment of ASD. These elements are identified and examined briefly in the next section.

3.4   Elements in providing an educational placement for children with autistic spectrum disorders

The review of educational approaches in the preceding section suggests that the following elements represent best practice in implementing learning and teaching programmes for children with ASDs: early identification and intervention; a

knowledge and understanding of the implications of ASDs and general learning disabilities for learning and teaching; multidisciplinary assessment and support; parental involvement; access to an appropriate curriculum; a co-ordinated approach to curriculum planning and implementation; and opportunities for inclusion with non-ASD peers.

3.4.1 Early identification and intervention

All the recent literature refers to the importance of identifying children with ASDs as early as possible in order to effect early individualised, focused interventions (Autism Working Group, 2002a; National Research Council, 2001; New York State Department of Health, 1999). It is possible to identify ASDs by the time a child is eighteen months old; however, ASDs are seldom identified until after the age of two years, with the average age of identification being five (Autism Working Group, 2002a). The National Autism Plan for Children points out that identification is more difficult in young children who are more able and in those with significant developmental delay (National Initiative for Autism Screening and Assessment, 2003). In some instances children with ASDs may not be identified until after they have been several years in school.

Guralnick (1997) observes that, from a scientific viewpoint, the methodological problems inherent in conducting research into early intervention preclude making unequivocal statements about its efficacy. While there is no evidence in the research to suggest that early identification and intervention are critical to children achieving their full potential, the benefits of early identification and intervention are nevertheless acknowledged by both parents and professionals (Dawson and Osterling, 1997; Guralnick, 1997; Harris and Handleman, 1994; Rogers, 1996). Recent consultative documents proposing a framework for early learning have endorsed the concept of the early identification of children with special educational needs to enable them to progress and to experience learning as an enjoyable and interesting process (National Council for Curriculum and Assessment, 2004, 2005).

3.4.2 Knowledge and understanding of autistic-spectrum disorders and general learning disabilities

The features of ASDs and general learning disabilities have significant implications for approaches to education and intervention. It is imperative that staff members have a knowledge and understanding of both ASDs and general learning disabilities and of the implications of both for children's learning and teaching programmes (National Research Council, 2001). Table 4 provides a summary of the implications of ASDs and general learning disabilities for learning and teaching

The National Autism Plan for Children recommends that programmes related to ASD awareness training should be available continuously for all personnel involved in addressing the needs of children with ASDs (National Initiative for Autism Screening and Assessment, 2003). The wide range of IQ scores and verbal skills and the differing needs of children with ASDs require that teachers be adequately trained both in the area of special education and in the area of ASDs through the provision of a continuum of training programmes (National Research Council, 2001).

TABLE 4: IMPLICATIONS OF ASDS AND GENERAL LEARNING DISABILITIES FOR LEARNING AND TEACHING	
1. TRAITS PARTICULAR TO ASDS AND THE IMPLICATIONS OF THESE TRAITS FOR LEARNING AND TEACHING	
IMPAIRMENTS IN SOCIAL INTERACTION	• Literal thinkers • Confused by the rules that govern social behaviour • Require direct teaching in social skills • Need to structure opportunities for the child to use social skills in different situations • Awareness of the difficulties for the child inherent in less structured situations, such as break and lunch time, and in transition between lessons
IMPAIRMENTS IN LANGUAGE AND COMMUNICATION	• The child needs support in understanding the purpose and value of communication • Attention needs to be directed towards teaching the social aspects of language, e.g. turn-taking • Direct teaching of gestures, facial expression, vocal intonation, and body language • Use of visual material or signing to support and facilitate the child's communicative initiations and responses • Providing precise instructions for the child to follow
IMPAIRMENTS IN IMAGINATION, WITH A RESTRICTED RANGE OF BEHAVIOUR, ACTIVITIES AND INTERESTS	• The child must be helped to cope with new and varying activities • Pre-empting the child's anxiety, which results from being presented with unstructured or unfamiliar situations without prior warning or explanation • Devising and implementing a structured play programme
ADDITIONAL DIFFICULTIES	• Sensory and perceptual sensitivities • Fine or gross motor control problems • Eating, drinking or sleeping irregularities • Inability to block out distractions • Inappropriate eye contact • Poor organisational skills • Difficulties in managing time and completing work • Adjustments must be made to the classroom to deal with the child's undersensitivity or oversensitivity to noise, smell, taste, light, touch, or movement • Implementing structured and systematic programmes for developing the child's gross or fine motor skills • Eliciting relevant information regarding the child's eating, drinking or sleeping irregularities • Structuring the classroom environment to reduce distractions • Securing the child's attention before issuing instructions or engaging in conversation • Providing structures that assist the child in understanding the duration of tasks • Making the links between different tasks clear to the child • Direct and clear teaching of identified skills

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TABLE 4: IMPLICATIONS OF ASDS AND GENERAL LEARNING DISABILITIES FOR LEARNING AND TEACHING (continued)	
2. IMPLICATIONS OF GENERAL LEARNING DISABILITIES FOR LEARNING AND TEACHING	
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 or gross motor co-ordination.
MODERATE GENERAL LEARNING DISABILITY	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, and leisure and aesthetic pursuits.
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.
The curriculum experiences of children with general learning disabilities should be augmented by the Draft Curriculum Guidelines for Teachers of Students with General Learning Disabilities.	

Sources: Autism Working Group (2002a, 2002b); Department of Education and Science (2001a); Jordan (1985, 1999, 2001); Jordan and Powell (1995); National Autistic Society (2002); Special Education Review Committee (1993); National Council for Curriculum and Assessment (2002).

3.4.3   Multidisciplinary assessment and support

The National Autism Plan for Children advocates that assessment be carried out by a multidisciplinary team with specific clinical ASD training (National Initiative for Autism Screening and Assessment, 2003). The adoption of a team approach that addresses the multiple areas of difficulty is recommended (National Research Council, 2001). A comprehensive, multidisciplinary, multi-agency team should comprise a core team of professionals that includes a senior clinical psychologist, a speech and language therapist, an occupational therapist, a social worker, a behaviour management specialist, a child psychiatrist, and a paediatrician. It would be of benefit if the assistance of a psychologist from the National Educational Psychological Service (NEPS) and a teacher with expertise in the area of ASD were available if required. The multidisciplinary, multi-agency team should have a central role in co-ordinating and determining the specific roles of the team members, the forms of assessment required, the goals of the assessment, and the implementation of the subsequent individualised learning and teaching programme.

It is suggested that the multidisciplinary, multi-agency team should consult parents and children with ASDs where appropriate. People with ASDs have insightful observations on the world as experienced by them and should be consulted where possible about their education programmes (Gerland, 1996; Grandin, 1996). The Autism Working Group (2002a) suggests that self-advocacy must be the goal for all children with ASDs, while acknowledging that the views of a child with particular communication difficulties may need to be mediated through parents, carers, or others who know the child.

3.4.4   Parental involvement

Parental involvement in the learning and teaching programmes of children with ASDs is imperative in order to foster consistency between all environments for the children (Jordan and Powell, 1995). The education of a child with ASDs requires that daily opportunities are used to teach and generalise skills in functional settings (Jordan, 2001). Parents possess important information about their child, which can contribute greatly to the learning and teaching process. The National Research Council (2001), citing Lovaas (1987), points out that the proponents of ABA have carried the role of parental involvement further than other approaches, and in some instances it is parents who undertake much of the overseeing and management of home-based ABA programmes, with an outside consultant offering periodic assistance. Ozonoff and Cathcart (1998) report a study in which the parents of young children with ASDs were taught to use TEACCH methods in the home. In contrast with a control group that received no treatment, the children whose parents used TEACCH methods in the home showed greater improvement in a variety of skills over a four-month period. The Autism Working Group (2002a) states that it is essential that parents be provided with information in relation to ASDs and that professionals liaise closely with parents so that the home environment supports any intervention in the educational setting, and vice versa.

3.4.5   Access to an appropriate curriculum

The National Research Council (2001) points out that, because children with ASDs have diverse needs and learn best in diverse situations, there is no one ideal curriculum for all children with ASDs. Access to the curriculum must be carefully planned, therefore, in accordance with each child's individual strengths and needs. Jordan, Maddock and Jones (2001) state that each child's ability should be

recognised, valued and encouraged through the curriculum and its provision. This rationale is consistent with that of the Primary School Curriculum (National Council for Curriculum and Assessment, 1999). However, Jordan, Maddock and Jones also acknowledge that additional curriculum features are required to address the wide range of abilities and impairments found in children with ASDs. Dawson and Osterling (1997) propose that a curriculum for children with ASDs should emphasise five skill domains: attending to elements of the environment; imitating others; comprehending and using language; playing appropriately with toys and interacting socially with others. The Autism Working Group (2002a) observes that an emphasis on developing communication, social interaction, play, leisure and life skills and on providing access to the academic curriculum appear to be elements of an effective programme for individual children with ASDs.

Problem behaviours of children with ASDs are among the most challenging and stressful issues faced by schools and families in their efforts to provide appropriate education programmes (National Research Council, 2001). Such behaviours may result in children being excluded from social, educational, family or community activities. Interventions that involve providing highly supportive teaching environments and generalisation strategies, predictability and routine, individual education plans (IEPs) and a functional approach to behaviour problems have been shown to decrease the likelihood of the occurrence of problem behaviours (National Research Council, 2001). It has been observed that the cause of problem behaviours for children with ASDs is frequently related to communication difficulties, which can be eliminated through the use of visually supported communication strategies (Hodgon, 1999).

3.4.6 **Co-ordinated approaches to curriculum planning and implementation**
Co-ordinated approaches to curriculum planning and implementation are particularly important for children with ASDs, as consistency of approach is critical in providing learning and teaching programmes for these children. Greenspan and Wieder (1997) observe that while a child's developmental profile is consistent with a particular diagnostic category, individual children and their families nevertheless require an individualised programme based on the child's specific motor, sensory and cognitive patterns as well as strengths, resources, and concerns. The National Research Council (2001) advises that the careful documenting of a child's unique strengths and weaknesses can have a significant impact on the design of effective intervention programmes and is particularly critical because of the unusual developmental profiles common in children with ASDs. The Autism Working Group (2002a) states that the identification of clear short-term and long-term goals for learning and teaching and the continual monitoring and evaluation of provision facilitate best practice. Cooper (1996) suggests that IEPs can provide a structure for the systematic planning and evaluation of learning programmes for pupils with special educational needs. The Task Force on Autism recently recommended that detailed IEPs be provided for all children with ASDs (Department of Education and Science, 2001a).

In addition to individual planning for children with ASDs, an emphasis should be placed on corporate, collaborative and comprehensive planning in order to clarify learning and teaching aims and objectives and the manner in which they are to be achieved (Department of Education and Science, 1999b). The compilation of a school plan enables all personnel involved in the education of children with ASDs to join in the clarification and statement of the school's aims and objectives in relation to the learning and teaching of children with ASDs and to agree strategies for attaining those aims and objectives.

3.4.7   **Inclusion**

Jordan, Jones and Murray (1998) conclude that an evaluation of research on integration approaches provides substantial if not conclusive evidence that effectively managed integration can enhance the development of children with ASDs. Research conducted by Whitaker et al. (1998) suggests that there are positive outcomes from the establishment of circles of friends to accommodate the inclusion of children with ASDs in mainstream schools. Where possible, access to the curriculum for children with ASDs should provide for planned and focused inclusion opportunities with non-ASD peers.

The following chapter presents the outcomes of the evaluation within a thematic framework that reflects the elements of good practice identified in the literature review.

Chapter 4   EVALUATION OUTCOMES

Chapter 4   Evaluation Outcomes

4.1   Introduction

The evaluation outcomes are presented consecutively in accordance with the phases of the evaluation and with the themes that were identified in the literature review. At the end of each section of this chapter there is a summary of the positive features of practice, the principal areas for development as identified in each phase of the evaluation, and a summary of the questionnaire data collected from school principals, directors of centres, teachers, and tutors.

It should be noted that references to individual educational programmes (IEPs) in this document denote the particular individual planning process that exists for children with autistic spectrum disorders (ASDs) in each educational placement.

4.2   Evaluation Phase 1: Applied behaviour analysis centres for education

An evaluation of educational provision was conducted in four centres in which applied behaviour analysis (ABA) approaches were exclusively or largely implemented. Two of the centres employed the comprehensive application of behaviour analysis to schooling (CABAS®) approach to education and were supported by two external consultants from the United States, who contributed to management issues, parent education schemes, staff development, and the development of individual children's programmes. CABAS® was described as a system-wide approach to education in which the scientific principles of behavioural psychology were applied in a measured and systematic manner to the provision of individual educational programmes for children with ASDs. The remaining two centres described their approach as being based on the principles of ABA.

The ninety-three staff members employed in the four centres to meet the needs of seventy-seven children included directors, supervisors, tutors, and secretaries. Directors of the centres adopted a leading role in designing IEPs for children and in providing professional support for supervisors, tutors, and parents. Supervisors monitored the implementation and review of educational programmes in consultation with the director. Tutors were responsible for directly implementing the children's IEPs.

Forty-five parent questionnaires were returned from three of the four centres in which ABA approaches were predominantly used. One centre did not return questionnaires, and therefore the analysis of parent questionnaires in respect of ABA centres is based on three centres only. All four directors completed questionnaires, and fifty questionnaires were returned from tutors in ABA centres.

The length of the school day in ABA centres ranged from five-and-a-half hours to seven hours, and children attended the centres for between forty-two and forty-seven weeks each year.

4.2.1   Early identification and intervention

Children's ages ranged from three years and three months to nine years and nine months. The average age of diagnosis was three years, and the average age of enrolment at the centres was four-and-a-half.

Parents were asked to state the type of health or education service their children were placed in before enrolling in the centres. The children had attended a variety of placements, and only four had not availed of any service before enrolment in the centres. The children had availed of a combination of part-time and full-time provision, which included health-funded pre-school services, private pre-school

services, special schools for children with general learning disabilities, special classes for children with ASDs, special schools for children with ASDs, home tuition, ABA home-based programmes, and play therapy.

In addition to a diagnosis of ASDs, the children in these centres were described in professionals' reports as having average intelligence, mild or moderate general learning disabilities, attention-deficit hyperactivity disorder (ADHD), severe communication difficulties, sensory integration difficulties, severe developmental delay, speech and language delay, or severe expressive and receptive language delay. A variety of professional reports was available in respect of the children attending the centres and variously included psychological reports, occupational therapy reports, and physiotherapy reports. There was little evidence that the findings and recommendations of professional reports were linked in a systematic manner to the planning and implementation of the children's educational programmes. The inclusion of an educational profile containing a summary of the professionals' reports, assessment findings and parents' observations could profitably be included in children's individual files.

4.2.2 Knowledge and understanding of autistic spectrum disorders

One of the ABA centres did not return details of staff members' qualifications and experience, and therefore the analysis of data in this respect refers to three centres only. Specific professional teaching qualifications were not required of staff members in these centres, and few had recognised qualifications, while none had completed a postgraduate course in the learning and teaching of children with special educational needs. In one ABA centre some members of the staff had completed courses in the picture exchange communication system (PECS) or the LÁMH signing system, or both. However, in the majority of centres the ABA approach was used to the virtual exclusion of other approaches that have been shown to be effective with children with ASDs. All ABA centres demonstrated a commitment to staff development and training in the application of the principles of ABA in implementing children's educational programmes. Staff-pupil interactions were positive, affirmative, and supportive.

The ABA approach to the learning and teaching of children in the centres was implemented in an intensive and consistent manner. A high level of participation by the children and on-task behaviour in both individual and group activities was observed. Tasks were presented in a structured manner and provided the children with a sense of predictability, structure, and routine. Staff members employed a reduced use of language and provided precise directions in the implementation of the curriculum. They were conscious of the need to secure the children's attention and motivation before presenting each task. A carefully devised system of extrinsic rewards, based on the children's identified interests and preferences, was used successfully to reinforce their identified learning objectives. The choice of reinforcers and resources suggested that some cognisance was taken of the children's strengths as visual learners in the implementation of learning and teaching programmes.

Staff members demonstrated some awareness of the social, communication and imagination deficits associated with the triad of impairments. There was some awareness that environmental adaptations were necessary in order to address the children's sensory and perceptual sensitivities in relation to lighting, acoustic levels, heating and ventilation systems, and classroom displays and colouring. The

possibility of engaging in a risk assessment that systematically addresses these sensory and perceptual sensitivities of children with ASDs could profitably be considered.

4.2.3 Multidisciplinary assessment and support

The provision of multidisciplinary assessment and support services for children in ABA centres varied considerably, with the majority receiving no such support. Where children were receiving support, the support was funded by the board of management, the Health Service Executive, or privately by parents.

Parents expressed concern about the lack of support services available in the centres and at home. Ninety-one per cent of the parents stated that they were either very dissatisfied or dissatisfied with the procedures and processes for the diagnosis and assessment of ASDs; seven per cent expressed satisfaction; none stated that they were very satisfied; and two per cent did not respond. (See fig. 2.)
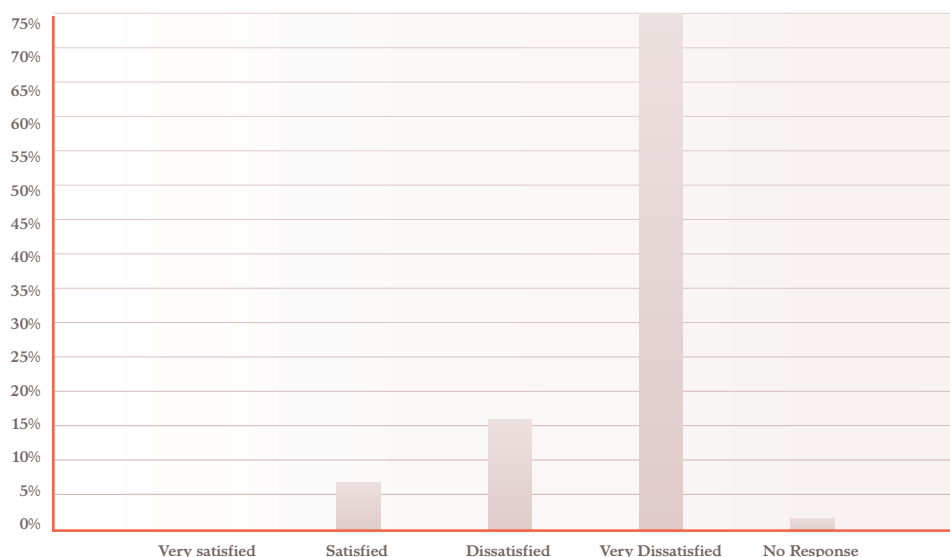
Fig. 2: Parental satisfaction with diagnostic and assessment processes and procedures in ABA centres

Where multidisciplinary assessment and support services were available, the positive contribution of these services was evident in the content of the children's IEPs, in the learning and teaching observed, and in the wide range of attractive and stimulating resources that were available.

4.2.4 Parental involvement

A commendable emphasis was placed on the importance of parental involvement in ABA centres. In two of the centres it was stated as a condition of enrolment that parents declare a willingness to participate in a parent education programme and to become involved in the parents' association. Parents had access to support and training from the centres and were provided with regular information regarding their children's progress. Fig. 3 illustrates the level of parental involvement in the children's IEPs, which varied from 37 being fully or quite involved to 8 being involved to some extent or not at all.

Fig. 3: Parental involvement in individual educational programmes in ABA centres

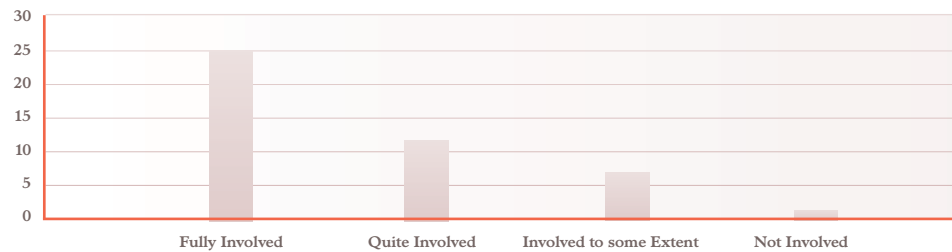Parents' satisfaction that the educational provision in the centres met their children's needs was high. Parents were asked to identify the extent to which different factors were instrumental in their decision to enrol their children in ABA centres. The responses showed that the factors that exerted a very high or a high level of influence on a considerable number of parents who chose to send their children to ABA centres were the provision of an IEP, the adoption of a specific approach to the teaching of children with ASDs, the length of the school day, staff members' awareness of the implications of the triad of impairments for learning and teaching, the availability of one-to-one attention, staff members' respect for children and an understanding of their disability, good home-centre links, staff members' specialist training in teaching children with ASDs, the perception that other schools or centres would not meet the child's needs, the accessibility of the service, and placement having been recommended by professionals.

Parents' comments showed a high level of satisfaction with their children's placement in ABA centres. They referred to the children's progress in relation to cognitive and academic achievement and to development in relation to behaviour and to social, communication, toilet training and self-management skills. The method of instruction used was stated to be individualised and flexible in order to meet the children's changing needs. The availability of one-to-one attention for each child was viewed as being of particular benefit. Satisfaction was expressed with the manner in which one of the centres incorporated music, songs and art in the ABA programme. A wish was expressed that no additional time should be taken from the daily timetable for therapies but that these should be provided outside school hours. It was suggested by one parent that a more holistic approach to meeting the needs of the child in one centre might be adopted through the inclusion of art, drama, music and physical education in the curriculum.

The parents endorsed the opportunity provided to work with their children in the centres, which enabled them to apply the observed approaches at home. The emphasis on developing home-school links and providing regular parent education sessions was also endorsed. The children were described as happy and respected, and parents referred to the positive manner in which this had influenced the quality of life for the whole family. A concern was expressed that centres had not been granted permanent status, which was described as a source of stress and worry. Clarification and guidelines regarding procedures for the dual enrolment of children in the centres and in mainstream education were requested. Concern was expressed about the long distances some children were required to travel daily.

4.2.5   **Access to an appropriate curriculum**

The children had access to a curriculum based on a number of content areas, which included attentional skills, receptive and expressive language, fine and gross motor skill development, daily living and social skills, literacy, numeracy, and the management of maladaptive behaviour. They had access to content areas based on their identified individual needs and in a hierarchical sequence that ranged from the least difficult component of the task to the most difficult.

Staff members were less familiar with the principles and subject areas of the Primary School Curriculum and the Draft Curriculum Guidelines for Teachers of Students with General Learning Disabilities. The rationale of the Primary School Curriculum in providing children with opportunities to obtain access to a balanced variety of strands and strand units is based on fostering each child's individual identity in a holistic manner through nurturing the spiritual, moral, cognitive, emotional, imaginative, aesthetic, social and physical dimensions of development (National Council for Curriculum and Assessment, 1999, 2002). The children did not obtain access to a balanced variety of the strands and strand units of the Primary School Curriculum in the subjects of English, mathematics, social, environmental and scientific education (SESE), social, personal and health education (SPHE), music, visual arts, drama, and physical education.

The children had access to the curriculum predominantly in an individual capacity in one-to-one teaching sessions. Some group teaching had been introduced in the centres, and this could be further developed to enable children to generalise social, communication and play skills taught in individual sessions. The use of social stories, drama and role-playing could be used beneficially to assist in the generalising of children's social, communicative and imaginative development. A knowledge of the integrated nature of the Primary School Curriculum and of learning was not a central element of the children's access to the curriculum.

The management of the children's behaviour was comprehensive, consistent, and effective. Social skills were taught in a direct manner, and socially acceptable behaviour was positively and successfully reinforced.

A wide selection of teaching resources, audio-visual equipment and information and communication technology (ICT) was available to facilitate the children's learning and teaching. The role of ICT in meeting children's needs associated with the triad of impairments and in directly supporting curriculum development was less developed.

Ninety-eight per cent of parents stated that they were either very satisfied or satisfied that the curriculum being implemented in the centre met their children's assessed needs, while two per cent reported dissatisfaction. No parent was very dissatisfied with the curriculum. (See fig. 4.)
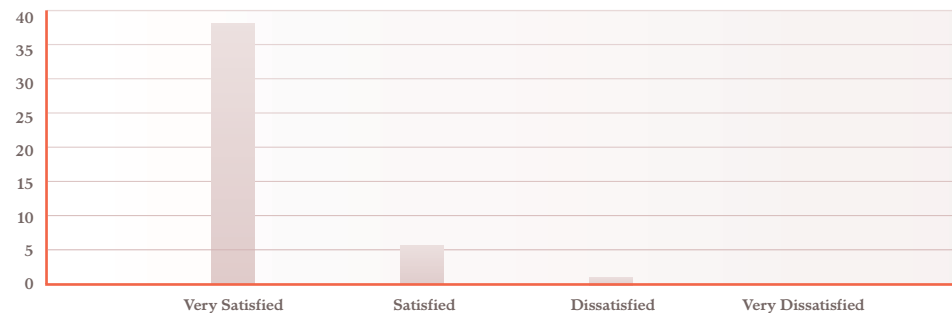
Fig. 4: Parents' satisfaction that the curriculum meets the child's assessed needs in ABA centres. 45 parent-questionnaires returned. 38 very satisfied, 6 satisfied, 1 dissatisfied, 0 very dissatisfied.

Twenty parents reported that their children were not pursuing home-based programmes, either before or during their current enrolment in the centres. Of the twenty-five responses reporting involvement in home-based programmes, twenty-four were pursuing these programmes before enrolling in the centre, and five of these continued to avail of such programmes. One child had become involved in a home-based programme that was funded by the Department of Education and Science since enrolling in the centre. One child who had not been pursuing a home-based programme before enrolment was pursuing a privately funded weekly five-hour ABA programme. Home-based programmes before enrolment were funded by the Department of Education and Science in eleven instances and privately funded in six instances, with seven children being funded by both the Department of Education and Science and private funding. Home-based programmes before enrolment varied from five to thirty hours in duration, and home-based programmes operating at the time of the evaluation varied from five to fifteen hours in duration.

4.2.6 **Co-ordinated approaches to curriculum planning and implementation**
A wide range of detailed documents was available in relation to the planning and implementation of the curriculum in the centres. Procedures and routines for the efficient daily operation of the centres were also carefully documented.

Planning for individual children's education programmes was systematic, coherent, and detailed. Cohesive links were evident between long-term planning, short-term planning, and classroom practice.

All the centres engaged in the systematic and detailed assessment, recording and monitoring of children's progress. A range of assessment procedures was effectively employed, including direct observation, video observation, and discrete trials. A quantitative approach to regularly recording and monitoring the children's progress was implemented. Less emphasis was placed on such assessment procedures as the systematic retention of samples of the children's work, curriculum profiles, check-lists, questionnaires, and consultation with pupils. The triad of impairments was accommodated in the implementation of the curriculum through the direct teaching of skills related to social interaction, communication, and imaginative development.

Staff members demonstrated a clear understanding of their roles and responsibilities, and learning and teaching activities were predictable and well organised.

4.2.7   Inclusion opportunities

All ABA centres displayed a commitment to facilitating the inclusion of children in mainstream schools as soon as this was considered practicable. A decision to include a child in a mainstream class was based on an assessment of the appropriateness of such a placement for the individual child. All centres expressed a willingness to provide support and advice for the staff of the mainstream school in which the child was enrolled in order to effect a smooth and successful transition.

Tutors generally accompanied the child to the mainstream school at first, in order to assist in the inclusion process and to monitor the child's progress. The specific procedures relating to collaborative planning for children's learning and teaching with mainstream staff members were less clear. At the time of the evaluation one child had been fully included and six children were included part-time in a mainstream school. Seven children were also attending pre-school settings part-time. Parents referred positively to the support of the centres in facilitating the inclusion of their children in mainstream pre-schools and schools.

4.2.8

POSITIVE FEATURES OF PRACTICE IN ABA CENTRES	• The majority of children had received an early diagnosis of ASD. • A clear commitment to staff development and training in the application of the principles of ABA was evident. • The ABA approach was implemented in an intensive and consistent manner. • Staff members interacted with the children in a positive and affirmative manner. • Some cognisance was taken of children's strengths as visual learners. • Some accommodation of the triad of impairments was evident in the implementation of the curriculum. • The involvement of parents in their children's education was promoted and facilitated. • Parents' satisfaction that the educational provision met the children's needs was high. • The length of the school day and the school year accommodated an increased intensity, frequency and duration of intervention. • The management of the children's behaviour was comprehensive, consistent, and effective. • A wide selection of teaching resources was available to facilitate the children's learning. • Policy documents defined the procedures and routines for the efficient daily operation of the centres and for the implementation of the curriculum. • Staff members demonstrated a clear understanding of their roles and responsibilities. • Planning for children's individual programmes was systematic, coherent, and detailed. • The children's progress was systematically assessed, monitored, and recorded. • The inclusion of children in mainstream schools was facilitated.

4.2.9

AREAS FOR DEVELOPMENT IN ABA CENTRES	• Linking the findings and recommendations of professional reports to curriculum planning and classroom practice. • Including a summary of professionals' reports, assessment findings and parents' observations in individual children's files. • Devising a clear qualification structure for staff members that takes cognisance of the importance of recognised teaching qualifications and postgraduate courses in the education of children with special educational needs. • Encouraging staff members to become familiar with the range of specific approaches to the learning and teaching of children with ASDs. • Engaging in a risk assessment that systematically addresses the sensory and perceptual sensitivities of children with ASDs in relation to lighting, acoustic levels, heating and ventilation systems, and classroom displays and colouring. • Providing a co-ordinated and systematic multidisciplinary assessment and support structure. • Familiarising staff members with the principles and subject areas of the Primary School Curriculum and the Draft Curriculum Guidelines for Teachers of Students with General Learning Disabilities. • Providing children with access to a balanced variety of the strands and strand units of the subject areas of the Primary School Curriculum. • Developing group teaching sessions to assist children in generalising social, communicative and imaginative skills. • Developing the role of ICT in meeting children's needs associated with the triad of impairments and in directly supporting the provision of the curriculum. • Employing a wider range of assessment procedures in monitoring and recording children's progress. • Taking more explicit cognisance in curriculum planning and implementation of the implications of ASDs and general learning disabilities for children's education. • Defining the specific procedures related to collaborative planning for children's learning and teaching in inclusive settings.

4.2.10   DIRECTORS' AND TUTORS' OBSERVATIONS AND COMMENTS IN ABA CENTRES

- All directors and almost all tutors stated that they were very satisfied that the educational provision and the curriculum in the centres met the assessed needs of children with ASDs

- Three directors stated that they were either very satisfied or satisfied that staff members in the centres were adequately equipped, in training and teaching experience, to meet the specific needs of children with ASDs, while one director expressed dissatisfaction

- Three directors referred to the philosophy of the centres as being concerned with creating a best-practice approach

- Thirty-eight tutors stated that they were either fully or quite involved in the development and review of IEPs for children in the centres

- Eleven tutors stated that they were involved to some extent, and one tutor stated that she was not involved at all, in the IEP process

- It was noted that almost all parents were involved in the development and review of IEPs

- Thirty tutors stated that other professionals were not involved in the development, implementation and review of IEPs, twelve tutors stated that other professionals were quite involved or involved to some extent, seven tutors stated that other professionals were fully involved in the process, and one tutor stated that this question was not applicable

- More than half the tutors stated that the availability of the psychological services was not applicable in the centres. Of those tutors who had the service of the psychologist, seven stated that they were very satisfied and seven that they were satisfied with the availability of this service. Five stated that they were dissatisfied and two that they were very dissatisfied with the availability of the psychological services

- Forty-nine tutors reported that they were either familiar to some extent, quite familiar or fully familiar with the triad of impairments and their implications for the management of the behaviour and learning of children with ASDs. One tutor stated that this question was not applicable

- Tutors referred positively to the individualised approach, the use of circle time, and the benefits of ABA

- One tutor felt there was a lot of pressure on tutors to do charting and make changes

- It was variously suggested by tutors that the recognition of other ASD-specific approaches might be considered, clearer links established with the national curriculum, more training provided in the management of inappropriate behaviour, and more access available to support services, such as speech and language therapy.

4.3   Evaluation Phase 2: Dedicated special schools for children with autistic
       spectrum disorders

An evaluation of educational provision was conducted in two dedicated special
schools for children with ASDs. At the time of the evaluation one of the schools
catered exclusively for children of primary-school age with ASDs and the other
catered both for children of primary-school age and for children with emotional
disturbance and ASDs. An eclectic approach to the learning and teaching of
children with ASDs was implemented in the schools, based on the individual
learning needs and strengths of each child.

Both schools were staffed in accordance with the criteria of the Department of
Education and Science and included the two principals, ten class teachers, and
twenty-three special-needs assistants. One of the schools also had four part-time
teaching posts. Classes were staffed in accordance with a pupil-teacher ratio of 6:1.
Special-needs assistants were appointed according to the terms of circular 07/02,
based on an allocation of two special needs assistants for each class (Department of
Education and Science, 2002a). Where it was considered necessary, additional
special needs assistants were allocated to assist the class teacher in meeting the
needs of individual children. In one school there were twenty-one children with
ASDs, while in the other school twenty-four of the thirty-two children had been
assessed as having ASDs.

Twenty-eight parent questionnaires were returned from the two dedicated special
schools for children with ASDs. The two principals completed questionnaires, and
eight questionnaires were returned from teachers in the schools.

The length of the school day and the school year in both schools was determined
with reference to circular 11/95, which states that a full school day in a national
school comprises not less than five hours and forty minutes and that a school year
comprises a minimum of 183 full school days (Department of Education and
Science, 1995). A summer programme is provided for children with ASDs in one of
the schools, and in the other school parents may avail of the home tuition scheme.
Both these initiatives are funded by the Department of Education and Science.

4.3.1   Early identification and intervention
The children's ages ranged from four years and eight months to thirteen years. The
average age of diagnosis was 3.9 years, and the average age of enrolment in the
schools was 5.5 years. Parents referred to the unsatisfactory early intervention and
diagnostic services.

Parents were asked to state the type of health or education service their child was
placed in before enrolling in the dedicated special school for children with ASDs. All
the children had attended a variety of placements before their enrolment in the
special schools. They had availed of a combination of part-time and full-time
provision that included health-funded pre-school services, private pre-school
services, special schools for children with general learning disabilities, ordinary
classes in mainstream primary schools, and home tuition.

In addition to a diagnosis of ASDs, children in these schools were described in
professionals' reports as having borderline intelligence, mild general learning
disabilities, attention-deficit hyperactivity disorder (ADHD), mild and severe

receptive and expressive language difficulties, dyspraxia, specific learning disability, oppositional defiant disorder, sensory processing difficulties, developmental delay, speech and language disorder, attachment disorder, or challenging behaviour. A variety of professional reports was available and variously included psychological reports, occupational therapy reports, speech and language therapy reports, and physiotherapy reports. The professionals' reports were considered in the planning and implementation of the children's educational programmes. The inclusion of an educational profile linked directly to children's learning and containing a summary of professionals' reports, assessment findings and parents' observations could usefully be included in children's individual files.

4.3.2   **Knowledge and understanding of autistic spectrum disorders**
All members of the teaching staff had recognised professional teaching qualifications, and a few had completed postgraduate courses in the learning and teaching of children with special educational needs. Almost all teachers had completed courses in the learning and teaching of children with ASDs. These included courses related to the implementation of the PECS, the treatment and education of autistic and related communication-handicapped children (TEACCH), ABA, social stories, and the Hanen approach. Some teachers had completed postgraduate certificate courses in ASDs and an on-line course related to understanding the implications of ASDs for learning and teaching. All special needs assistants had completed a range of courses relevant to their work in the schools. The schools demonstrated a commitment to staff development and training in a range of approaches to the learning and teaching of children with ASDs. Staff-children interactions were supportive and affirmative.

All activities during the school day were characterised by structure, predictability, and routine. Staff members demonstrated a deep understanding of the implications of ASDs for children's learning and teaching and steadily employed a repertoire of appropriate teaching approaches in the implementation of the curriculum. Children were observed to engage in their various tasks in a meaningful and appropriate manner. Cognisance was taken of the importance of providing the children with a sense of predictability, structure, and routine, of securing their attention and motivation before presenting each task, and of organising tasks in a clear and structured manner. Visual cues, such as directional signs, photographs, pictures, symbols, and flashcards, were effectively used to indicate areas of activity and to provide precise directions in the implementation of the curriculum.

Positive behaviour and task engagement were reinforced through the use of a range of reinforcers based on the children's identified interests and preferences. The choice of reinforcers and resources was commensurate with the children's strengths as visual learners. Staff members demonstrated an explicit knowledge of the social, communication and imagination deficits associated with the triad of impairments. It was evident that the implications of the triad of impairments were considered in the planning and implementation of children's learning and teaching programmes. Some attention was given to addressing the sensory and perceptual sensitivities of children with ASDs in relation to lighting, acoustic levels, heating and ventilation systems, and classroom displays and colouring. The possibility of engaging in a risk assessment that systematically addresses these sensory and perceptual sensitivities of children with ASDs should be considered.

4.3.3 **Multidisciplinary assessment and support**

Multidisciplinary assessment and support services for children in dedicated special schools variously provided services in relation to psychology, psychiatry, speech and language therapy, sensory integration therapy, music therapy, behaviour management, and nursing. This support was funded by the Health Service Executive. Some members of the multidisciplinary teams had provided training courses for teachers and special needs assistants in relation to supporting children with ASDs and have supported the inclusion of selected children in mainstream schools.

Parents criticised the lack of a meaningful level of access to these support services. They referred to the lack of a social work service and the absence of a satisfactory respite service. The difficulty experienced by parents in obtaining information about the availability of support services and alternative provision was also referred to.

Sixty-three per cent of parents stated that they were either very dissatisfied or dissatisfied with the procedures and processes for the diagnosis and treatment of ASDs; thirty-three per cent stated that they were either very satisfied or satisfied with these procedures and processes; four per cent did not respond. (See fig. 5.)
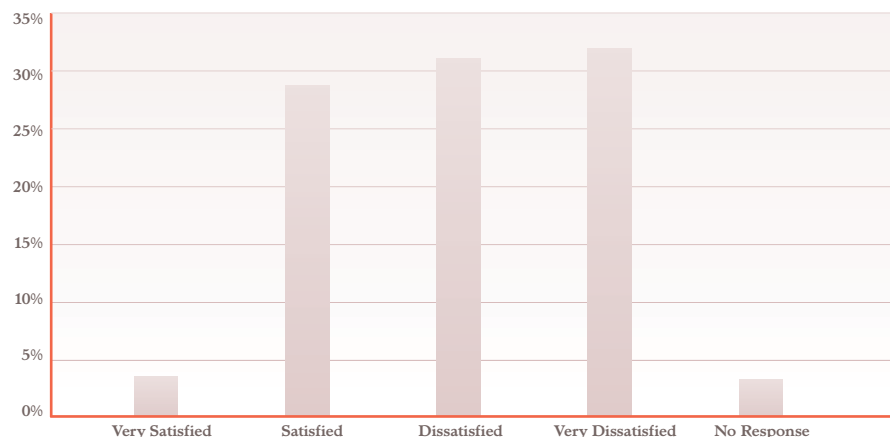

Fig. 5: **Parents' satisfaction with diagnostic and assessment processes and procedures in dedicated special schools for children with autistic-spectrum disorders**

Multidisciplinary assessment and support services contributed positively to the content of children's IEPs, to the management of children's behaviour, and to the staff's awareness of the implications of the triad of impairments for the children's learning and teaching.

4.3.4 **Parental involvement**

Schools reported an open-door policy with regard to parents. The centrality of parents' involvement in the education of the children was affirmed by schools through the use of home-school journals, formal and informal parent-teacher meetings, and meetings related to the compilation, implementation and review of children's IEPs.

Fig. 6 illustrates the level of parental involvement in children's IEPs, which varied from twenty-five being fully or quite involved to three being involved to some extent.
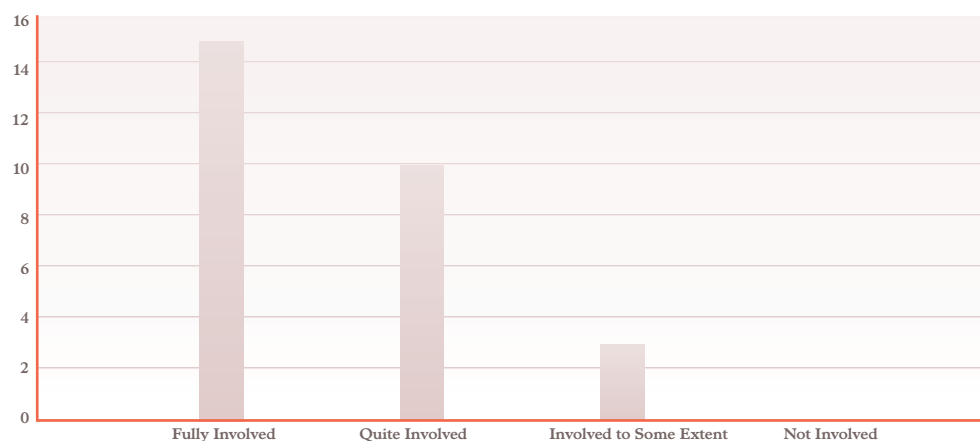
Fig. 6: Parents' involvement in individual educational programmes in dedicated special schools for children with autistic spectrum disorders

Parents' comments showed a high level of satisfaction with their children's placement in the dedicated schools and with the emphasis placed on meeting the holistic needs of the child. The parents were asked to identify the extent to which different factors were instrumental in their decision to enrol their child in a dedicated special school for pupils with ASDs. The responses suggest that the factors that exerted a very high or a high level of influence on a considerable number of parents were the provision of an IEP, the adoption of a specific approach to the teaching of children with ASDs, access to appropriate support services, staff members' awareness of the implications of the triad of impairments for learning and teaching, the availability of one-to-one attention, staff members' respect for children and an understanding of their disability, good home-school links, staff members' specialist training in teaching children with ASDs, the perception that other schools or centres would not meet the child's needs, the accessibility of the service, and placement having been recommended by professionals.

Parents referred to children's progress in relation to academic and cognitive achievement and to development in relation to behaviour and to social and communication skills. The commitment of staff members in meeting the needs of the children was praised. The method of instruction used was stated to be of a very high standard, with one parent describing the school their child attended as a centre of excellence.

Parents expressed concern about a range of issues, including the long distances some children were required to travel daily, the need to organise activities during school holidays to provide for the development of children's social skills and to pre-empt the distress children experience through the disruption of routines, the lack of information available to parents when choosing a placement, the protracted process involved in securing enrolment, the lack of respite services, and the delay and in one instance the insensitivity of the diagnostic process.

Parents specified additional factors that influenced them in choosing to send their children to a dedicated special school for pupils with ASDs. One parent described the school as doing great work for their son; one praised the active approach of the staff; another referred to the fact that a sibling was already enrolled in the school. The
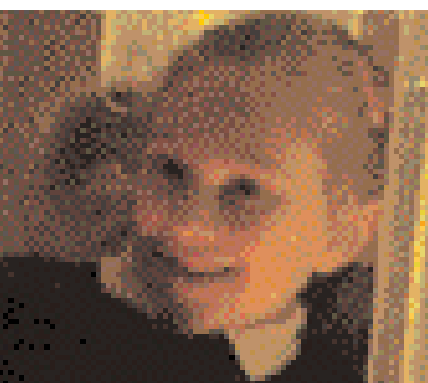
integrated approach of staff, parents and therapists in meeting the needs of children was commended by one parent, while another cited the reputation of the school as a determining factor. Mainstream was described by one parent as not being an option, as it was considered not to be an appropriate placement for the child.

4.3.5 **Access to an appropriate curriculum**
The children had access to a curriculum based on the Primary School Curriculum, which was successfully augmented by a range of ASD-specific texts. These subject areas included English, mathematics, social, environmental and scientific education (SESE), social, personal and health education (SPHE), music, visual arts, drama, and physical education. Attention was directed to ensuring that the children had access to a broad and relevant range of curriculum areas in accordance with their assessed abilities and needs. Curriculum-related displays, support areas and samples of the children's completed work were a positive feature in almost all classrooms and effectively consolidated the children's experiences with the curriculum.

Staff members were familiar with the principles and the rationale of the Primary School Curriculum and demonstrated a knowledge of the integrated nature of the curriculum and of children's learning. The children were provided with access to a balanced variety of strands and strand units, which fostered each child's individual identity in a holistic manner. The Draft Curriculum Guidelines for Teachers of Students with General Learning Disabilities were available and could be further used in facilitating the planning and implementation of the curriculum.

The children were provided with a balanced range of individual work, group work, class work, and structured opportunities for social interaction. The LÁMH signing system, elements of the PECS, the TEACCH approach, incidental teaching, social stories and a clear and unambiguous language of instruction were used to good effect. All teaching approaches were adapted to meet individual children's needs through the use of differentiated curriculum tasks based on each child's level of ability. Social interaction and communication were encouraged and promoted throughout the school day. Care was taken that curricular activities were structured to assist in the development of turn-taking skills within the class group and to foster positive social interaction between peers.

Preventive strategies that included providing clear physical and visual boundaries in the classroom environment were successfully employed in the management of the children's behaviour. Daily visual schedules and work systems provided the children with accessible information about the occurrence and sequence of daily activities and effectively pre-empted children's anxiety with the abstract nature of time. Elements of ABA, such as token economy systems, based on the children's identified interests and preferences were used in the differential rewarding of appropriate behaviour. The communicative function of behaviour was considered, and all children's attempts at requesting, seeking attention, rejecting, refusing, giving and seeking information and expressing feelings were acknowledged and affirmed.

A wide range of teaching resources, audio-visual equipment and ICT was available to facilitate children's learning and teaching. Resources were carefully chosen to optimise the children's engagement in their various tasks. ICT was used effectively to facilitate the teaching of the curriculum in English and mathematics. The role of ICT in meeting children's needs associated with the triad of impairments and in facilitating curriculum development in other subject areas was less developed.

Eighty-six per cent of the parents stated that they were either very satisfied or satisfied that the curriculum being implemented in the special schools for children with ASDs met their child's assessed needs, while fourteen per cent stated that they were either dissatisfied or very dissatisfied. (See fig. 7.) Parents' comments suggest that this dissatisfaction with the curriculum relates to the inadequate level of multidisciplinary support available to the schools.
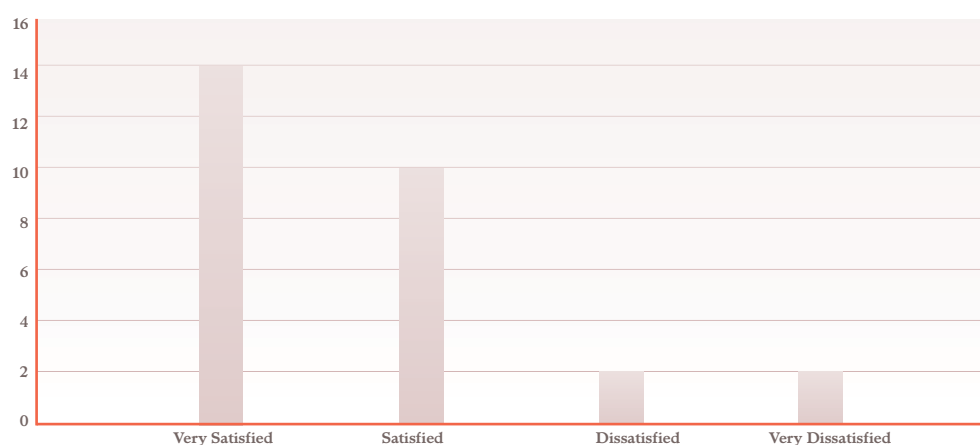

Fig. 7: Parents' satisfaction that the curriculum meets children's assessed needs in dedicated special schools for pupils with autistic spectrum disorders

Twenty-three parents stated that their children had not been pursuing home-based programmes either before or during their current enrolment in the dedicated special schools for children with ASDs. Of the five responses reporting involvement in home-based programmes, five children were pursuing these programmes before enrolling in the school, and two of these five continued to avail of home-based programmes. Home-based programmes before enrolment were funded by the Department of Education and Science in three instances and privately funded in two instances. Such programmes before enrolment in the school varied from ten to twenty hours in duration, and those now operating varied from five to twenty hours in duration.

4.3.6   **Co-ordinated approaches to curriculum planning and implementation**
A school plan as required by the Education Act (1998) was available in both schools. The schools' educational philosophy and aims and how they proposed to achieve them were referred to in the school plans. These plans defined the planning, implementation and provision of the curriculum and the organisation of the schools' resources and contained a range of central policy and practice documents. The rationale for the use of particular ASD approaches and the implications of the triad of impairments for the learning and teaching of children with ASDs could profitably be defined in the school plans.

Teachers engaged in long-term and short-term planning for children's learning and teaching with reference to the subject areas of the Primary School Curriculum. The alignment of the school plan with the majority of individual teachers' planning assisted in consolidating the children's learning and teaching experiences and in implementing

a spiral approach to the provision of the curriculum. Cohesive links were evident between long-term planning, short-term planning, and classroom practice. Individual educational programmes were devised regularly in consultation with the class teacher, parents, and relevant members of the multidisciplinary assessment and support team. To further streamline planning in the schools the agreed whole-school approach to curriculum and individual planning should be accordingly detailed.

Due attention was directed to engaging in detailed assessment, recording and monitoring of the children's progress. A range of assessment practices that variously included teacher-observation, teacher-designed tasks, retention of samples of children's completed work, curriculum profiles, check-lists and progress reports were productively used to inform the children's learning and teaching programmes. The school plans would benefit from the inclusion of a statement that reflects the range of assessment practices observed during the evaluation. Cognisance was taken of both the implications of a diagnosis of ASD and general learning disability in the planning and implementation of the children's learning and teaching programmes.

Staff members had a clear knowledge of their roles and responsibilities in respect of individual children, which contributed in a positive manner to the implementation of the children's learning and teaching programmes.

4.3.7 **Inclusion opportunities**

One of the schools had a part-time teaching post for forty days per year assigned to promote inclusion programmes in mainstream schools, and the support of the clinical team was available for facilitating children's inclusive placements as required. The rationale, underlying principles and procedures for the partial or full inclusion of children in mainstream schools were beneficially documented in a school policy statement. A decision to include a child in a mainstream class was based on an assessment of the appropriateness of a mainstream placement for the individual child. Parents referred positively to the support of the special school in facilitating the inclusion of their children in mainstream schools. It was recommended during the evaluation that inclusion policies and practices be developed in one of the special schools to provide the children with access to inclusive learning and teaching opportunities with their non-ASD peers.

At the time of the evaluation three children were taking part in inclusion projects in mainstream schools. The school was also engaged in discussions with a number of schools in order to arrange inclusion opportunities for other pupils, and arrangements for reverse inclusion were also being explored.

4.3.8

Positive features of practice in special schools for children with ASDs
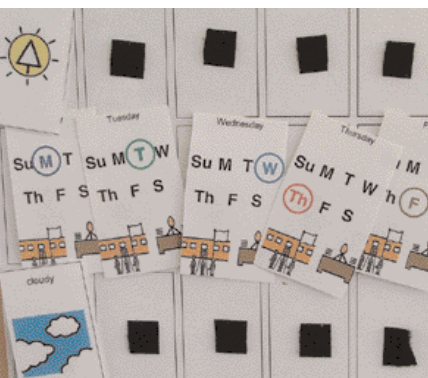
- Professionals' reports were considered in the planning and implementation of children's education programmes.
- Staff members had recognised professional teaching qualifications and were familiar with the range of specific approaches to both the learning and teaching of children with ASDs and special educational needs.
- Staff members demonstrated an explicit knowledge of the triad of impairments, and the implications of these and of general learning disability were considered by all staff members in the planning and implementation of children's education programmes.
- A clear commitment to staff development and training in the application of a range of appropriate approaches to the learning and teaching of children with ASDs was evident.
- Employing children's strengths as visual learners was a central element in the provision of the curriculum.
- Staff-children interactions were supportive and affirmative.
- Multidisciplinary support contributed in a positive manner to children's programmes.
- The involvement of parents in their children's education was promoted and facilitated.
- Parents' satisfaction that the educational provision met the children's needs was high.
- Staff members were familiar with the principles and subject areas of the Primary School Curriculum.
- Children had access to a broad and balanced variety of the strands and strand units of the subject areas of the Primary School Curriculum.
- Children were provided with a balanced range of individual work, group work, class work, and structured opportunities for social interaction.
- Curriculum tasks were differentiated to meet each child's individual needs.
- The management of children's behaviour was comprehensive, consistent, and effective.
- A wide selection of teaching resources was available to facilitate the children's learning.
- ICT was used effectively to facilitate the provision of the curriculum in English and mathematics.
- A school plan as required by the Education Act (1998) was available in both schools.
- Teachers engaged in curriculum planning and planning for children's individual needs.
- Children's progress was regularly assessed, monitored, and recorded.
- Staff members had a clear knowledge of their roles and responsibilities.
- The inclusion of children in mainstream schools was facilitated in one school.

4.3.9	**Areas for development in special schools for children with ASDs**	- Establishing procedures for earlier intervention and diagnostic services. - Including a summary of professionals' reports, summative assessment findings and parents' observations in individual children's files. - Engaging in a risk assessment that systematically addresses the sensory and perceptual sensitivities of children with ASDs in relation to lighting, acoustic levels, heating and ventilation systems, and classroom displays and colouring. - Increasing the availability and range of multidisciplinary support. - Further employing the Draft Curriculum Guidelines for Teachers of Students with General Learning Disabilities to facilitate the planning and implementation of the curriculum. - Developing the role of ICT in meeting children's needs associated with the triad of impairments and in directly supporting all curriculum areas. - Further describing the rationale for the use of particular ASD approaches and the implications of the triad of impairments for the learning and teaching of children with ASDs in the school plan. - Streamlining planning through defining in the school plan the agreed whole-school approach to curriculum and individual planning. - Including a statement in the school plan that reflects the range of assessment policies and practices observed during the evaluation. - Developing inclusion policies and practices in one of the special schools.

4.3.10 PRINCIPALS' AND TEACHERS' OBSERVATIONS AND COMMENTS IN SPECIAL SCHOOLS FOR CHILDREN WITH ASDS

- The principals stated that they were very satisfied that the curriculum and educational provision in the schools met the assessed needs of children with ASDs and expressed satisfaction that the staff members were adequately equipped, in training and teaching experience, to meet the specific needs of children with ASDs

- The principals and a few teachers suggested the need for additional accommodation and facilities in the schools

- All teachers expressed satisfaction that the educational provision made in the schools met the assessed needs of children with ASDs

- All class teachers were fully involved in the development and review of IEPs for the children in the schools

- The survey reported that all parents were involved in the IEP process

- All schools noted some involvement of other professionals in the development and review of IEPs

- All eight teachers reported dissatisfaction with the availability of the psychological services

- All teachers stated that they were satisfied that the curriculum in the schools met the assessed needs of children with ASDs

- All teachers referred to being satisfied that they were equipped, in training and teaching experience, to meet the specific needs of children with ASDs

- All teachers stated that they were either fully familiar or quite familiar with the triad of impairments and their implications for the management of the behaviour and learning of children with ASDs

- One teacher commented that one of the strengths of the teaching staff was the level of high-quality training that was spread among individuals and the practice of staff members sharing training and experience

- One teacher expressed concern that children need strategies to help them deal with emotional issues, and that parents and teachers needed to be able to refer consistently to a psychologist for useful strategies and appropriate support

- One teacher suggested that visiting days to the school by individuals and groups seeking advice should be limited, as they cause disruption to classroom learning and one-to-one work

- Two teachers commented on the need for provision for training for special-needs assistants and for teachers in the management of special-needs assistants.

4.4 **Evaluation Phase 3: Special schools for children with general learning disabilities**
An evaluation of educational provision was conducted in three special schools, one each for children within the mild, moderate and severe to profound range of general learning disability. All the schools catered for children aged four to eighteen. The evaluation concentrated on children who had a diagnosis of ASDs in addition to a general learning disability. Teachers adopted a range of approaches to the learning and teaching of children with ASDs in accordance with the individual learning needs and strengths of each child.

All the classes that participated in the evaluation were staffed in accordance with the criteria of the Department of Education and Science and included twelve class teachers, twenty-two special needs assistants, and three part-time teaching posts. The evaluation was conducted in respect of fifty children with ASDs. Classes were staffed in accordance with a pupil-teacher ratio of 6:1 for children with ASDs and children with severe to profound general learning disabilities. A few children with ASDs were included in classes for children with mild general learning disability, and the pupil-teacher ratio in these classes was 7:1. Special needs assistants were appointed according to the terms of circular 07/02, based on an allocation of two special needs assistants for each class for children with ASDs and children with severe to profound general learning disability (Department of Education and Science, 2002a). Where it was considered necessary, additional special needs assistants were allocated to assist the class teacher in meeting the needs of individual children.

Twenty-three parent questionnaires were returned from the three special schools for children with general learning disabilities. Two principals completed questionnaires, and eight were returned from teachers in special schools for children with general learning disabilities.

The length of the school day and the school year in both schools was determined with reference to circular 11/95, which states that a full school day in a national school comprises not less than five hours and forty minutes and that a school year comprises a minimum of 183 full school days (Department of Education and Science, 1995). Children with ASDs may avail of a summer programme in all the schools.

4.4.1 **Early identification and intervention**
Children's ages ranged from four years and five months to twelve years and nine months. A few children aged up to seventeen years were enrolled in one of the classes for children with mild general learning disability and were therefore included in the evaluation. The average age of diagnosis for children was four years, and the average age of enrolment at the school was 5.1 years. (One response was blank, and therefore it was not possible to determine the age of enrolment for this pupil). Parents expressed dissatisfaction with the inadequacy of the early intervention and diagnostic services for children with ASDs.

Parents were asked to state the type of health or education service their child was placed in before enrolling in the special school for children with general learning disabilities. All the children had attended a variety of full-time and part-time placements before their enrolment in the special schools, including health-funded pre-school services, private pre-school services, ordinary classes in mainstream primary schools, and home tuition.

In addition to a diagnosis of ASDs, children in these schools were described in professionals' reports as having mild, moderate or severe to profound general learning disabilities, challenging behaviour, mild to severe receptive and expressive language difficulties, general developmental delay, or sensory processing difficulties. Relevant professional reports were available and variously included psychological reports, occupational therapy reports, speech and language therapy reports, and physiotherapy reports. The professionals' reports were considered in the planning and implementation of children's education programmes. The inclusion of an educational profile, linked directly to children's learning and containing a summary of professionals' reports, assessments findings, and parents' observations, could profitably be included in all children's individual files.

4.4.2   Knowledge and understanding of autistic-spectrum disorders

All members of the teaching staff had recognised professional teaching qualifications, and a few had completed postgraduate courses in the learning and teaching of children with special educational needs. Almost all the teachers had completed courses in the learning and teaching of children with ASDs. These included courses related to the implementation of PECS, TEACCH, ABA, the LÁMH signing system, and sensory integration. Some teachers had completed postgraduate certificate courses in ASDs and an on-line course in understanding the implications of ASDs for learning and teaching. A few teachers were studying for a master's degree related to the learning and teaching of children with special educational needs or ASDs. The majority of special needs assistants had completed a range of courses relevant to their work in the school. It was evident that the schools were concerned to ensure that staff members availed of a variety of appropriate training to assist them in meeting the needs of children with ASDs. All staff members interacted with the children in an affirmative and supportive manner.

Children's activities during the school day were characterised by structure, predictability, and routine. Staff members displayed a thorough knowledge of the implications of ASDs for children's learning and teaching and accordingly employed a repertoire of appropriate teaching approaches in a flexible and creative way to meet the children's needs. Tasks were structured in a purposeful and focused manner, which effectively sustained the children's on-task behaviour. Attention was directed towards providing a safe, secure and predictable classroom environment, securing the children's attention and motivation before presenting each task, and accommodating some of the sensory and perceptual sensitivities of children with ASDs in the structure and organisation of the class. It would be beneficial to engage in a risk assessment that systematically addresses the sensory and perceptual sensitivities of children with ASDs in relation to lighting, acoustic levels, heating and ventilation systems, and classroom displays and colouring. Visual cues, such as directional signs, photographs, pictures, symbols, and flashcards, were used in an effective and appropriate manner. A range of reinforcers and motivators based on the children's identified interests were used successfully to reinforce the children's positive behaviour and engagement in tasks. Staff members employed a comprehensive knowledge of the social, communication and imagination deficits associated with the triad of impairments in planning and implementing children's learning and teaching programmes.

4.4.3   Multidisciplinary assessment and support

Multidisciplinary assessment and support services for those in special schools for children with general learning disabilities variously provided services in relation to

psychology, paediatrics, occupational therapy, physiotherapy, speech and language therapy, social work, and sensory integration therapy. This support was funded by the Health Service Executive. The contribution and benefit of the support services was evident in the content of children's IEPs, in the management of their behaviour, and in staff members' detailed knowledge of the implications of the triad of impairments for children's learning and teaching.

Parents criticised the inadequate level of access to these support services. They referred to the lack of a social work service, the absence of a satisfactory respite service, the unavailability of support in the management of challenging behaviour, and the need for the provision of social skills training. The difficulty experienced in obtaining information about the availability of support services and alternative provision was also referred to.

Seventy per cent of parents stated that they were either very dissatisfied or dissatisfied with the procedures and processes for the diagnosis and treatment of ASDs, thirty per cent stated that they were satisfied, and none stated that they were very satisfied. (See fig. 8.)
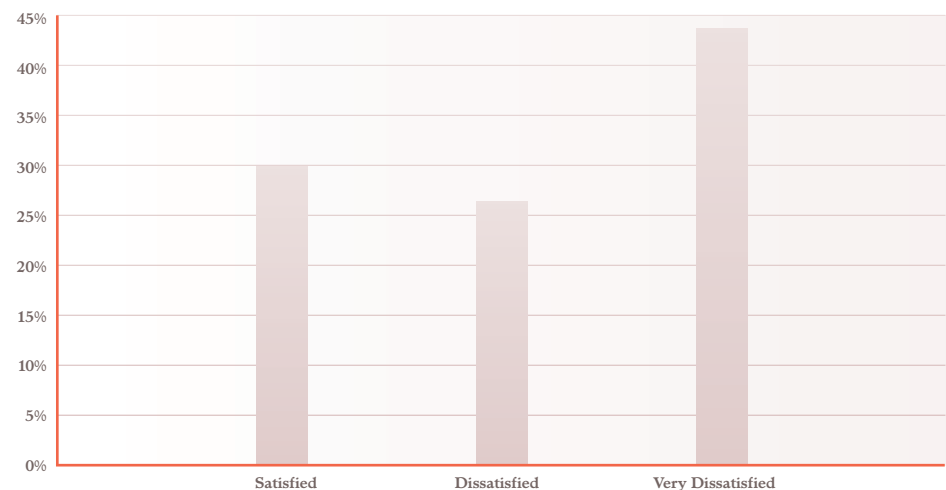
Fig. 8: Parents' satisfaction with diagnostic and assessment processes and procedures in schools for children with general learning difficulties

4.4.4 **Parental involvement**

Schools were aware of the importance of regularly consulting and collaborating with parents and encouraged their involvement in the children's learning and teaching programmes. The use of home-school journals, formal and informal parent-teacher meetings and parental involvement in the compilation, implementation and review of IEPs showed that schools valued and encouraged parents' involvement. The role of parents in the implementation of IEPs could profitably be defined in school planning documents.

Fig. 9 illustrates the level of parental involvement in children's IEPs, which varied from fifteen being fully or quite involved to eight being involved to some extent or not involved at all.
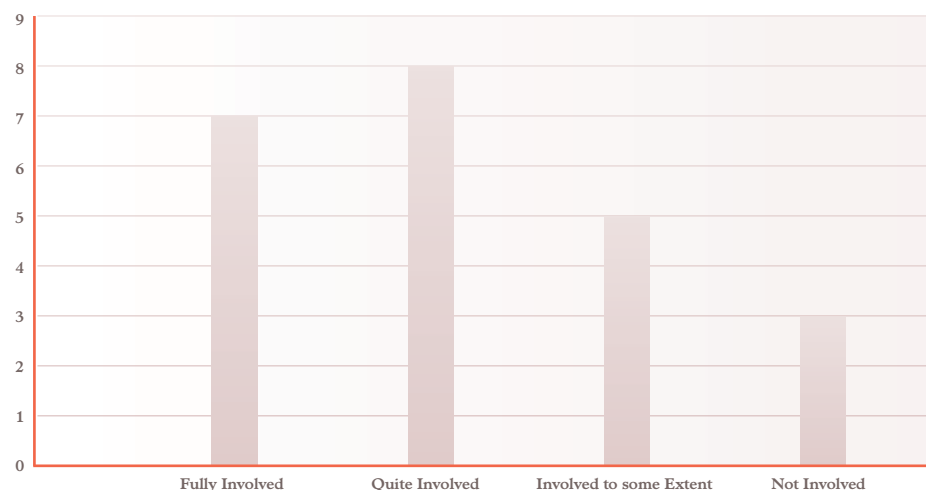
Fig. 9: Parental involvement in children's educational programmes in special schools for children with general learning disabilities

Parents' comments showed a high level of satisfaction with their children's placement in the special schools for children with general learning disabilities. They referred to the exceptional commitment of staff members, the preparation of IEPs, the prospective availability of sensory integration therapy, the support services available within the school, and the low pupil-teacher ratio. The emphasis on developing home-school links was also endorsed.

Parents were asked to identify the extent to which different factors were instrumental in their decision to enrol their child in a special school for children with general learning disabilities. The responses showed that the factors that exerted a very high or a high level of influence on a considerable number of parents were the provision of an IEP, the adoption of a specific approach to the teaching of children with ASDs, access to appropriate support services, staff members' awareness of the implications of the triad of impairments for learning and teaching, satisfactory accommodation and services, the availability of one-to-one attention, staff members' respect for children and an understanding of their disability, good home-school links, staff members' specialist training in teaching children with ASDs, the unavailability of an appropriate alternative service, the perception that other schools or centres would not meet the child's needs, the accessibility of the service, and placement having been recommended by professionals.

Some parents expressed concern about a range of issues, including the unavailability of alternative provision in a mainstream school, the inadequacy of the IEP process, the nature of the summer provision, the length of the school day and the school year, the eclectic teaching approach adopted by the school, and absenteeism among staff members. One parent criticised the general deployment of special needs assistants and suggested that it would be preferable for one special needs assistant to be allotted to an individual child for a specific period. Two parents referred to the delay experienced in sanctioning the employment of special needs assistants. Another parent suggested that a co-ordinator of services for children with ASDs should be appointed. The process of application to the Department of Education and Science for home tuition was criticised with regard to the delay and to the format of the application forms.

4.4.5   **Access to an appropriate curriculum**

The children had access to a curriculum based on the Primary School Curriculum and the Draft Curriculum Guidelines for Teachers of Students with General Learning Disabilities, which was successfully augmented by a range of ASD-specific texts. These subject areas included English, mathematics, social, environmental and scientific education (SESE), social, personal and health education (SPHE), music, visual arts, drama, and physical education. They had access to a broad and relevant range of curriculum areas in accordance with their assessed abilities and needs. The curriculum content was matched to the children's learning needs and capacities through the careful selection of learning targets, the design and presentation of tasks, the creation of opportunities for generalisation and consolidation, and the purposeful design of teaching materials. In almost all classes the children's curriculum experiences were effectively consolidated through the use of curriculum-related displays and support areas and the retention of samples of completed work. The development of essential life skills was successfully incorporated in the broad subject areas of the curriculum and was reinforced formally and informally throughout the school day.

Staff members were familiar with the principles and the rationale of the Primary School Curriculum and demonstrated a knowledge of the integrated nature of the curriculum and of children's learning. Attention was directed towards providing the children with access to a balanced variety of strands and strand units, which contributed to fostering each child's individual identity in a holistic manner. The Draft Curriculum Guidelines for Teachers of Students with General Learning Disabilities were used effectively in facilitating the planning and implementation of the curriculum.

The children were provided with a balanced range of individual work, group work, class work, and structured opportunities for social interaction. The LÁMH signing system, incidental teaching, social stories and a clear and unambiguous language of instruction were used to good effect. Children's learning and teaching programmes would benefit from the systematic use of an agreed selection of signs from the LÁMH signing system. The eclectic range of teaching approaches employed by the school was adapted and differentiated to meet individual children's needs through the use of differentiated curriculum tasks based on each child's level of ability. Social interaction, communication, turn-taking and awareness of others were encouraged and promoted informally throughout the school day and in the area of social, personal and health education.

Preventive strategies that included minimising visual and auditory distractions, providing daily visual schedules for children and creating clear physical and visual boundaries in the classroom environment were successfully employed in the management of the children's behaviour. Elements of ABA, such as token economy systems, based on the children's identified interests and preferences were used in the differential rewarding of appropriate behaviour. The children's behaviour was interpreted in the context of the triad of impairments, and the communicative function of behaviour was carefully considered.

A wide range of teaching resources, audio-visual equipment and ICT was available to facilitate children's learning and teaching. Resources were purposefully and effectively selected to optimise the children's engagement in their various tasks. A commendable emphasis was placed on providing the children with developmentally

suitable and age-appropriate materials. ICT was used effectively to facilitate the teaching of the curriculum in a few subject areas. The role of ICT in meeting children's needs associated with the triad of impairments and in facilitating curriculum development in other subject areas was less developed.

Seventy-four per cent of the parents stated that they were either very satisfied or satisfied that the curriculum being implemented in the special schools for children with general learning disabilities met their child's assessed needs, while twenty-six per cent stated that they were either dissatisfied or very dissatisfied with the curriculum. (See fig. 10.) Parents' comments suggest that this dissatisfaction with the curriculum related to the inadequate level of multidisciplinary support available to the schools.
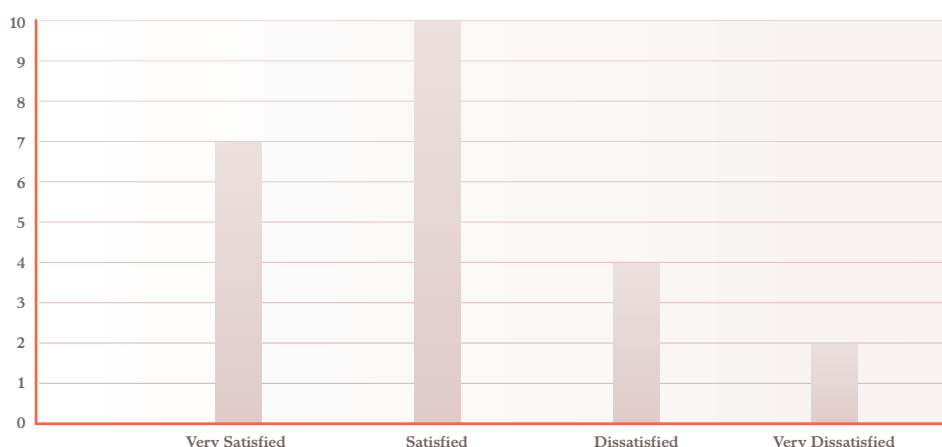

Fig. 10: Parents' satisfaction that the curriculum meets children's needs in special schools for children with general learning disabilities.

Nineteen parents stated that their children were not pursuing home-based programmes either before or during their current enrolment in the special school for children with general learning disabilities. Of the four responses reporting involvement in home-based programmes, four were pursuing these programmes before enrolling in the school, and one of these four continues to avail of home-based programmes. Home-based programmes before and during enrolment were funded exclusively by the Department of Education and Science. Information on the duration of home-based programmes was provided in one instance only and was stated to be for ten hours.

4.4.6   **Co-ordinated approaches to curriculum planning and implementation**
A school plan as required by the Education Act (1998) was available in all schools. The schools' educational philosophy and aims and how they proposed to achieve them were referred to in the school plans. These defined the planning, implementation and teaching of the curriculum and the organisation of the schools' resources and contained a range of policy and practice documents. The rationale for the use of the full range of ASD approaches observed during the evaluation, the training provided for staff members and the implications of the triad of impairments for the learning and teaching of children with ASDs could profitably be defined in the school plans.

The teachers engaged in long-term and short-term planning for children's learning and teaching programmes with reference to the subject areas of the Primary School Curriculum. A systematic approach to curriculum planning and a consistency of approach within school, classroom and individual programmes was evident in almost all the planning. A coherent link was discernible between the content of the school plan and individual teachers' planning in relation to curriculum content, teaching methods, and resources. Individual educational programmes were devised regularly in consultation with the class teacher, parents, and relevant members of the multidisciplinary assessment and support team. Describing an agreed whole-school approach to curriculum planning and individual planning would further assist in streamlining the planning process.

The children's progress was regularly assessed, monitored, and recorded. A range of assessment practices that variously included teachers-observation, teacher-designed tasks, the retention of samples of children's completed work, check-lists, questionnaires, consultation with pupils, video and progress reports was productively used to inform the children's learning and teaching programmes. The school plan defined some of the approaches to assessment and record-keeping observed at the class level. Consideration should be given to adopting a uniform approach to the assessment, monitoring and recording of children's progress in all classes. Cognisance was taken of the implications of ASDs and general learning disabilities in the planning and implementation of children's learning and in teaching programmes.

Staff members' clear knowledge of their roles and responsibilities contributed in a positive manner to the implementation of the children's learning and teaching programmes.

4.4.7 **Inclusion opportunities**

The schools demonstrated a willingness to include children with ASDs in other classes in the schools and in mainstream schools where appropriate. A range of policies and procedures with regard to inclusion was defined in the school plans and included references to consultation, monitoring, review and development involving the principal, class teacher, parents, and support team. The implementation of inclusion in individual cases proceeded gradually and was based on a detailed consideration of each child's individual strengths and their readiness to engage with a more complex and spontaneous social and physical environment and the need for appropriate adjustments in that environment.

In one school a particularly commendable practice was observed whereby children with ASDs were invited to participate in school assembly each morning at a level appropriate to their tolerance of such social situations. To this end they were facilitated in exercising control over their own toleration levels and were supported in remaining at assembly or engaging in a parallel activity while assembly took place. A form of reverse inclusion was also implemented in one school, where children with ASDs were afforded opportunities to play in a specifically designed playroom with children without ASDs. These children were selected according to their ability to interact and communicate with the children with ASDs during play activities. The benefits of reverse inclusion should be considered and this approach adopted as a feature of inclusion policy and practice in all schools for children with general learning disabilities in the future.

At the time of the evaluation one child was taking part in an inclusion project with a mainstream school. Some children with ASDs were being included in non-ASD classes in the school for a number of sessions during the school day.

4.4.8	**Positive features of practice in special schools for children with general learning disabilities**	• The findings and recommendations of professional reports were linked in a systematic manner to curriculum planning and classroom practice. • Staff members had recognised professional teaching qualifications and were familiar with the range of specific approaches to both the learning and teaching of children with ASDs and special educational needs. • Staff members demonstrated an explicit knowledge of the triad of impairments, and both the implications of the triad of impairments and general learning disability were considered by all staff members in the planning and implementation of children's learning and teaching. • A clear commitment to staff development and training in the application of a range of appropriate approaches to the learning and teaching of children with ASDs was evident. • Using children's strengths as visual learners was an important element in the provision of the curriculum. • Staff-children interactions were supportive, affirmative, and encouraging. • Children's sensory and perceptual sensitivities were accommodated. • Multidisciplinary support contributed in a positive manner to the children's programmes. • The involvement of parents in their children's education was promoted and facilitated. • Parents' satisfaction that the educational provision met the children's needs was high. • Staff members were familiar with the principles and subject areas of the Primary School Curriculum. • The children had access to a broad and balanced variety of the strands and strand units of the subject areas of the Primary School Curriculum. • The children were provided with a balanced range of individual work, group work, class work, and structured opportunities for social interaction. • Curriculum tasks were differentiated to meet each child's individual needs. • The Draft Curriculum Guidelines for Teachers of Students with General Learning Disabilities were used effectively to facilitate the planning and implementation of the curriculum. • The management of children's behaviour was comprehensive, consistent, and effective. • A wide selection of teaching resources was available to facilitate children's learning. • ICT was used effectively to facilitate the teaching of the curriculum in a few curriculum areas. • A school plan as required by the Education Act (1998) was available in all schools. • The children's progress was regularly assessed, monitored, and recorded. • Staff members had a clear knowledge of their roles and responsibilities. • The inclusion of children in classes in the school and mainstream schools was facilitated.

| 4.4.9 | **Areas for development in special schools for children with general learning disabilities** | • Establishing procedures for earlier intervention and diagnostic services.

• Including a summary of professionals' reports, summative assessment findings and parents' observations in individual children's files.

• Engaging in a risk assessment that systematically addresses the sensory and perceptual sensitivities of children with ASDs in relation to lighting, acoustic levels, heating and ventilation systems, and classroom displays and colouring.

• Increasing the availability and range of multidisciplinary support.

• Describing parents' role in the implementation of IEPs in school planning documents.

• Consistently using an agreed selection of signs from the LÁMH signing system.

• Developing the role of ICT in meeting children's needs associated with the triad of impairments and in directly facilitating all areas of the curriculum.

• Further defining the rationale for the use of particular ASD approaches, the training provided for staff members and the implications of the triad of impairments for the learning and teaching of children with ASDs in the school plan.

• Defining in the school plan the agreed whole-school approach to curriculum planning and a uniform approach to the assessment, monitoring and recording of children's progress.

• Adopting reverse inclusion as a feature of inclusion policy and practice in the future. |

4.4.10   PRINCIPALS' AND TEACHERS' OBSERVATIONS AND COMMENTS IN SPECIAL SCHOOLS FOR CHILDREN WITH GENERAL LEARNING DISABILITIES

- The principals expressed satisfaction that the curriculum and educational provision in the schools met the assessed needs of children with ASDs and were satisfied that staff members were adequately equipped, in training and teaching experience, to meet the specific needs of children with ASDs

- Schools noted some involvement of other professionals in the development and review of IEPs

- Principals and teachers variously criticised the inconsistent nature of multidisciplinary support

- Parents' involvement was stated to be a part of the IEP process

- A need for the provision of continuous and accessible training for teachers and special-needs assistants was identified

- Specific reference was made to the need for training in play, music, art and drama therapies, sensory integration, and early intervention

- The development of formal structures to support the inclusion of children with ASDs in mainstream schools was suggested

- All teachers reported that they were fully involved in the development and review of IEPs for children in their schools

- All teachers expressed satisfaction that the educational provision in the school met the assessed needs of children with ASDs

- Almost all teachers expressed satisfaction that the curriculum available met the assessed needs of children with ASDs

- One teacher commented that the Draft Curriculum Guidelines for Teachers of Students with Severe to Profound General Learning Disabilities did not make provision for children with ASDs

- All teachers referred to being satisfied that they were equipped, in training and teaching experience, to meet the specific needs of children with ASDs

- All teachers stated that they were familiar to some extent, quite familiar or fully familiar with the triad of impairments and the associated implications for the management of behaviour and learning of children with ASDs

- Teachers' comments criticised the lack of a consistent level of multidisciplinary support services

- In particular the need for occupational therapy and for a psychological service was stressed

- The requirement to engage in continuous fund-raising to finance resources needed for children's programmes and the inadequate accommodation were also criticised

- The need to develop a transition programme for older pupils and the desirability of providing respite care for parents were referred to.

4.5 **Evaluation Phase 4: Special classes for children with ASDs in mainstream primary schools**

An evaluation of educational provision was conducted in ten special classes for children with ASDs within seven mainstream primary schools. Three schools had two special classes, and the others had one each. Almost all classes adopted an eclectic range of teaching approaches to meeting the learning and teaching needs of children with ASDs. However, in the two classes in one of the schools ABA was the predominant approach used in meeting children's needs. It is to be noted that in these classes an eclectic and flexible approach to the use of other strategies was also adopted to meet the particular needs of each individual child.

All the special classes were staffed in accordance with the criteria of the Department of Education and Science and included ten class teachers and thirty-four special needs assistants. Special needs assistants were appointed according to the terms of circular 07/02, based on an allocation of two special needs assistants for each class for children with ASDs (Department of Education and Science, 2002a). In five instances additional special needs assistants, more than two per class, were sanctioned to assist the school in meeting the needs of individual children. Each child enrolled in the school in which ABA was the predominant approach had been allocated one special needs assistant. Fifty-eight children were enrolled in the ten classes. Classes were staffed in accordance with a pupil-teacher ratio of 6:1.

Sixteen parent questionnaires were returned from the ten classes for children with ASDs in mainstream schools. Five principals completed questionnaires, and six were returned from teachers in special classes for children with ASDs in mainstream schools.

In almost all classes the length of the school day and the school year was determined with reference to the terms of circular 11/95, which states that a full school day in a national school comprises not less than five hours and forty minutes and that a school year comprises a minimum of 183 full school days (Department of Education and Science, 1995). Children with ASDs can avail of a summer programme in five of the seven schools.

4.5.1 **Early identification and intervention**

The fifty-eight children in the ten classes were aged between four and fourteen, with most being in the age-range of five to eight years. The average age of diagnosis was 3.6 years, and the average age of enrolment in the classes was 5.8. Parents expressed dissatisfaction with the inadequacy of the early intervention and diagnostic services for children with ASDs. An inequity was identified between the system of privately and publicly funded assessment, with the former taking considerably less time than the latter.

Parents were asked to state the type of health or education service their child was placed in before enrolling in the class. The children had availed of a variety of placements before their enrolment. Only one had not availed of any service before enrolment. The children had availed of a combination of part-time and full-time provision that included health-funded pre-school services, private pre-school services, ordinary classes in a mainstream primary school, special classes for children with ASDs in a mainstream primary school, special schools for children with general learning disabilities, a special class for children with ASDs in a special school, and a special school for children with ASDs.

All the children in these classes had a diagnosis of ASDs in addition to significant differences in intellectual functioning, ranging from moderate general learning disability to above average. Most children had a general learning disability. The children were also variously described as having dyspraxia, severe language disorder, and attention-deficit hyperactivity disorder (ADHD). A range of professional reports was available and variously included psychological reports, occupational therapy reports, behaviour consultants' reports, and speech and language therapy reports. There was evidence that the professionals' reports were considered in the planning and implementation of children's educational programmes. It would be beneficial to compile an educational profile containing a summary of professionals' reports, assessment findings and parents' observations that relates directly to children's learning and teaching.

4.5.2   Knowledge and understanding of autistic-spectrum disorders

All members of the teaching staff had recognised professional teaching qualifications. Almost all had completed courses in relation to the learning and teaching of children with ASDs. These included courses related to the implementation of PECS, TEACCH, floor time, ABA, Asperger's syndrome, and the LÁMH signing system. One teacher was engaged in a postgraduate certificate course in ASDs. The majority of special needs assistants had completed a range of courses relevant to their work in the schools. The schools were positive in facilitating staff members in attending a variety of appropriate training to assist them in meeting the needs of children with ASDs. In three of the schools the Department of Education and Science provided funding, which the schools used to obtain access to ABA consultancy services. In a fourth school an ABA consultant was funded by a parents' support group. Staff-pupil relations were affirming and supportive.

Classroom organisation was characterised by predictability, structure, and routine. The children were enabled to concentrate on relevant information, maintain on-task behaviour, and work independently for substantial periods. The clear physical structure of the classroom environment was effective in reducing some of the sensory sensitivities of children with ASDs. It would be beneficial to engage in a risk assessment that systematically addresses the sensory and perceptual sensitivities of children with ASDs in relation to lighting, acoustic levels, heating and ventilation systems, and classroom displays and colouring.

Staff members were aware of the implications of ASDs for children's learning and teaching and successfully employed a repertoire of appropriate teaching approaches in an innovative manner to meet the children's needs. Visual cues, such as directional signs, photographs, pictures, symbols, and flashcards, were used in an effective and appropriate manner. Children's positive behaviour and task engagement were reinforced through the use of a range of reinforcers and motivators, based on the children's identified interests. It was evident that teaching approaches were implemented in close collaboration with the available multidisciplinary team, which had a positive impact on children's learning. Staff members' knowledge of the social, communication and imagination deficits associated with the triad of impairments was used effectively in the planning and implementation of children's learning and teaching programmes.

4.5.3   Multidisciplinary assessment and support

The levels of multidisciplinary assessment and support services for those in special classes for children with ASDs in mainstream primary schools varied considerably

between classes. In five instances support services were provided directly by the Health Service Executive or by another agency funded by the HSE. The services provided predominantly included speech and language therapy and occupational therapy. Psychology, psychiatry, physiotherapy and social work were generally less available. In one instance an autism counsellor liaised between home, school, and health board. In two instances multidisciplinary support services were reported to be very limited. The support services were observed to contribute in a positive manner to the content of children's IEPs, the management of children's behaviour, and staff members' detailed knowledge of the implications of the triad of impairments for children's learning and teaching. In some instances it was suggested that attention should be directed towards developing collaborative practices between staff members and visiting professionals to further assist in the co-ordination of learning and teaching activities.

Parents criticised the inadequate level of access to these support services. They referred to the inadequate levels of speech and language therapy, occupational therapy, physiotherapy, social work services, and psychological services.

Ninety-four per cent of the parents stated that they were either very dissatisfied or dissatisfied with the procedures and processes for the diagnosis and assessment of ASDs, with six per cent stating that they were satisfied and none stating that they were very satisfied. (See fig. 11.)
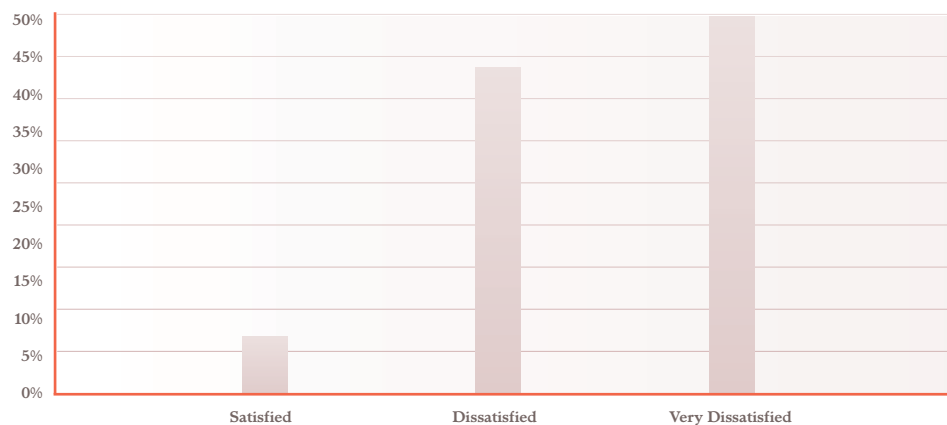

Fig. 11: Parents' satisfaction with diagnostic and assessment processes and procedures in special classes for pupils with ASDs in mainstream primary schools

4.5.4 Parental involvement

All the schools operated an open-door policy in relation to initiating and maintaining contact with parents. In almost all the schools the parents were involved to some degree in the development, implementation and review of children's IEPs. The use of home-school journals, formal and informal parent-teacher meetings and parental involvement in the compilation, implementation and review of IEPs shows that the schools valued and encouraged this involvement.

Fig. 12 illustrates the level of parental involvement in children's IEPs, which varied from seven being fully or quite involved to nine being involved to some extent or not at all. One parent who was not involved stated that there was no IEP in the class. It is recommended that parents be allocated a central role in the compilation, implementation and review of IEPs in all special classes, and that this role be defined in school planning documents.
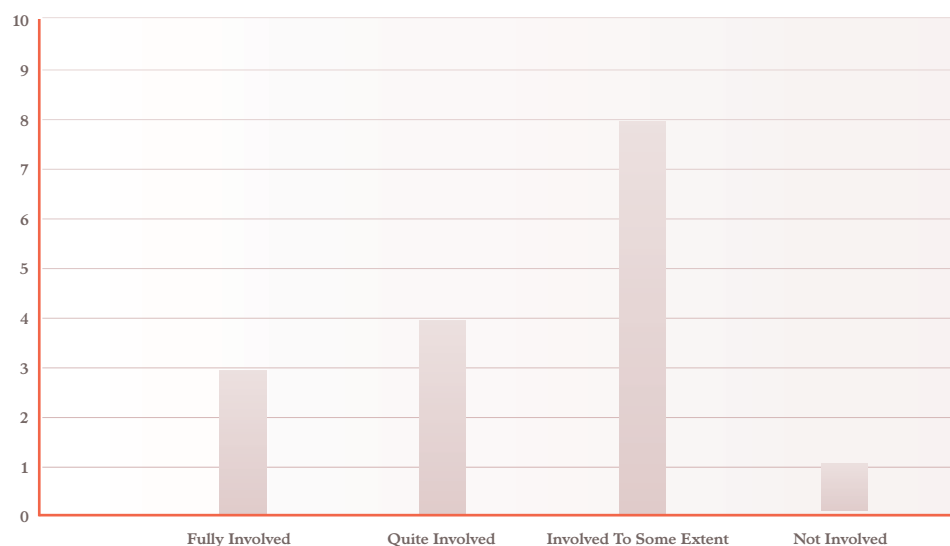
Fig. 12: Parental involvement in children's individual educational programmes in special classes in mainstream schools

Parents' comments show a high level of satisfaction with their child's placement in the special class for children with ASDs and with the emphasis on meeting the holistic needs of the child. They referred to children's progress in relation to cognitive and academic achievement, development in relation to behaviour, social and communication skills, the good reputation of the class, the fact that a child's siblings were in the school, the availability of support from special needs assistants, and the child's enjoyment of school. The dedication and commitment of staff members in meeting the needs of the children were praised.

Parents were asked to identify the extent to which different factors were instrumental in their decision to enrol their child in a special class for children with ASDs in a mainstream school. The factors that exerted a very high or high level of influence on a considerable number of parents were the provision of an IEP, staff members' awareness of the implications of the triad of impairments for learning and teaching, the availability of satisfactory accommodation and facilities, one-to-one attention for children, staff members' respect for children and an understanding of their disability, good home-school links, staff members' specialist training in teaching children with ASDs, the unavailability of appropriate alternative services, the perception that other schools or centres would not meet the child's needs, the accessibility of the service, and placement having been recommended by professionals.

Some parents expressed concern about a range of issues, including the unavailability of alternative provision, the lack of information about placement options and home tuition, uncertainty about post-primary education, and the desirability of access to art, music, and play therapy. The lack of opportunities for children to be included with their mainstream peers was criticised in one instance. The lack of home-school communication and the teaching methods in use were criticised by one parent, who suggested that alternative teaching methods should be explored and that in-service training should be provided for staff members. One parent expressed disappointment with the non-availability of an IEP and the lack of access to appropriate support services. The lack of support from the Health Service Executive was also criticised.

4.5.5   **Access to an appropriate curriculum**
The children had access to a curriculum based on the Primary School Curriculum that was matched to their needs and capacities through carefully planned individual learning activities and through the use of differentiation strategies in group activities. These subject areas included English, mathematics, social, environmental and scientific education (SESE), social, personal and health education (SPHE), music, visual arts, drama, and physical education. The Draft Curriculum Guidelines for Teachers of Students with General Learning Disabilities were used in some schools to augment the implementation of the curriculum (National Council for Curriculum and Assessment, 2002). In almost all instances staff members were familiar with the principles and the rationale of the Primary School Curriculum and demonstrated a knowledge of the integrated nature of the curriculum and of children's learning (National Council for Curriculum and Assessment, 1999). Recommendations were made in relation to structuring class timetables in accordance with the recommended time allocation for each curriculum area to ensure that children had access to the broad range of differentiated strands and strand units of the Primary School Curriculum. There was a particular emphasis on promoting the development of children's language and communication skills in a cross-curricular manner.

High levels of task engagement were achieved through the selection of appropriate materials, the differentiation of tasks to meet individual needs, the use of task analysis to create appropriate learning sequences the inclusion of visual cues and structures in tasks, the use of reward strategies, and the provision of measured support from staff members. Curriculum-related displays and support areas and the retention of samples of completed work effectively consolidated the children's curriculum experiences in almost all classes.

Due attention was directed towards providing the children with a balanced range of individual work, group work, class work, and structured opportunities for social interaction. An eclectic range of teaching approaches was effectively used to meet individual children's needs and variously included the LÁMH signing system, incidental teaching, social stories, PECS, TEACCH, and a modified language of instruction. Elements of the behavioural approach were evident in the use of task analysis and of reinforcers and motivators in the planning and implementation of the children's learning programmes.

A combination of teaching approaches associated with mainstream primary education, the education of children with special educational needs and ASD-specific approaches was used effectively to facilitate the children's access to the curriculum. It was suggested that greater use could be made of social stories in introducing topics for discussion and in providing exemplars of appropriate social behaviour. The consistent use of an agreed selection of signs from the LÁMH signing system in mainstream and special class settings would further assist in augmenting children's language and communication skills. Staff members were conscious of the implications of the triad of impairments for children's learning and teaching, and an emphasis was placed on developing the children's social, communicative and imaginative skills during all curricular activities.

The schools articulated a positive approach to the management of children's behaviour. Preventive strategies were used effectively and included the provision of clear physical and visual boundaries in the classroom environment, minimising

distractions, and developing distinct basic teaching areas. The communicative function of behaviour was considered, and all children's communicative attempts were appropriately acknowledged and affirmed. Children were observed to seek support appropriately, accept adult guidance, and display an understanding of the adults' high expectations in relation to the independent completion of tasks and appropriate behaviour.

A wide range of teaching resources, including audio-visual equipment and ICT, was available and was used effectively to facilitate children's learning and teaching. In almost all instances the resources were developmentally suitable and age-appropriate. ICT was used effectively to facilitate the teaching of the curriculum, particularly in the areas of literacy and numeracy. ICT could be further used to facilitate development in other areas of the curriculum and in meeting children's needs associated with the triad of impairments.

Eighty per cent of the parents stated that they were either very satisfied or satisfied that the curriculum being implemented in the special class met their child's assessed needs, while twenty per cent reported dissatisfaction. One response referred to being satisfied with the curriculum during the child's first year in the class and to becoming dissatisfied with the curriculum in subsequent years. No parent was very dissatisfied with the curriculum. (See fig. 13.)
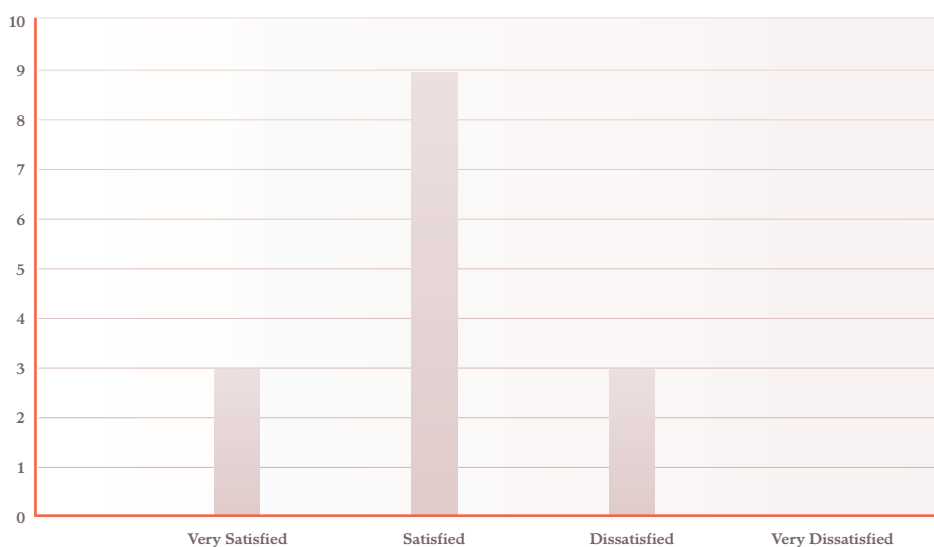
Fig. 13: Parents' satisfaction that the curriculum meets children's needs in special classes for pupils with ASDs

Twelve parents stated that their children were not pursuing home-based programmes either before or during their current enrolment in the special class for children with ASDs. Of the four responses reporting involvement in home-based programmes, two children were pursuing these programmes before enrolling in the school, one was now pursuing such a programme, and one had been pursuing such a programme before enrolling in the class and continued to avail of this. Home-based programmes before enrolment were exclusively funded by the Department of Education and Science and current home-based programmes were funded by the Health Service Executive in one instance and by private funding in another. Home-based programmes before enrolment in the school varied from five to nine hours in duration, and existing home-based programmes varied from two to ten hours in duration.

4.5.6   **Co-ordinated approaches to curriculum planning and implementation**

A school plan as required by the Education Act (1998) was available in all the schools. The schools' educational philosophy and aims and how they proposed to achieve them were articulated in the school plans. A range of policy and practice documents, arrangements for the planning, implementation and teaching of the curriculum and the organisation of the schools' resources were included in the school plans. In most instances these plans contained explicit references to ASD-specific provision. The aims and objectives of the ASD provision, reference to the triad of impairments, the implications of ASD and general learning disability for learning and teaching, the enrolment policy for children with ASDs, the services available, a commitment to staff training and development, teaching approaches, parental involvement and the management of behaviour were variously defined in school planning documents. In some instances a need was identified to refer in the school plan to the role and function of special-needs assistants and visiting personnel, to include all the teaching approaches being used in the classes and to define the school's policies on inclusion, behaviour management, curriculum implementation, and assessment and recording.

The teachers engaged in long-term and short-term planning for children's learning and teaching programmes with reference to the subject areas of the Primary School Curriculum and the school plan. A need was identified to develop a co-ordinated system of curriculum planning between classes and to foster greater links between teachers' planning and the school plan. Children's IEPs were devised regularly in consultation with the class teacher, parents, and relevant members of the multidisciplinary assessment and support team.

Attention was directed to regularly assessing, monitoring and recording children's progress. Teacher-observation, check-lists, teacher-designed tasks, the retention of samples of completed tasks, multidisciplinary assessment, video and progress reports, consultation with parents, standardised tests, reading logs and screening tests for ASDs were variously used to inform children's learning and teaching programmes. Some of the approaches to assessment and record-keeping observed at the class level were included in the school plan.

4.5.7   **Inclusion opportunities**

Policies and practices had been established in relation to the inclusion of children in school activities. Inclusion was sensitively managed and based on a detailed consideration of each child's readiness to engage in an inclusive setting with non-ASD peers. In most instances children with ASDs were included in mainstream classes for selected curricular activities. In a few instances children who were formerly enrolled in ASD classes were included in mainstream classes for all areas of the curriculum.

Special-needs assistants were effectively used to assist mainstream teachers in maintaining part-time and full-time inclusive placements. In the majority of instances reverse inclusion and "buddy systems" were in operation. The benefits of such methods should be considered and adopted as a feature of inclusion policy and practice in all schools in the future.

| 4.5.8 | **Positive features of practice in special classes for children with ASDs in mainstream primary schools** | • Professionals' reports were considered in the planning and implementation of children's education programmes.
• Staff members had recognised professional teaching qualifications and were familiar with the range of specific approaches to both the learning and teaching of children with ASDs and special educational needs.
• Staff members demonstrated an explicit knowledge of the triad of impairments, and both the implications of the triad of impairments and general learning disability were considered by all staff members in the planning and implementation of children's learning and teaching.
• A clear commitment to staff development and training in the application of a range of appropriate approaches to the learning and teaching of children with ASDs was evident.
• Using children's strengths as visual learners was an important element in the teaching of the curriculum.
• Staff-children interactions were affirmative and supportive.
• The children's sensory and perceptual sensitivities were accommodated.
• Multidisciplinary support contributed in a positive manner to children's programmes.
• The involvement of parents in their children's education was promoted and facilitated.
• Parents' satisfaction that the educational provision met the children's needs was high.
• Staff members were familiar with the principles and subject areas of the Primary School Curriculum.
• The children had access to a broad and balanced variety of the strands and strand units of the subject areas of the Primary School Curriculum.
• The children were provided with a balanced range of individual work, group work, class work, and structured opportunities for social interaction.
• Curriculum tasks were differentiated to meet each child's individual needs.
• An eclectic range of teaching approaches was effectively used in meeting the children's needs.
• The management of children's behaviour was comprehensive, consistent, and effective.
• A wide selection of teaching resources was available to facilitate children's learning.
• ICT was used effectively to facilitate the teaching of the curriculum in the areas of literacy and numeracy.
• A school plan as required by the Education Act (1998) was available in all the schools.
• The children's progress was regularly assessed, monitored, and recorded.
• Staff members had a clear knowledge of their roles and responsibilities.
• The inclusion of children in classes in the school and in mainstream schools was facilitated. |

4.5.9	**Areas for development in special classes for children with ASDs in mainstream primary schools**	• Ensuring compliance with circular 11/95 in all classes.

- Ensuring compliance with circular 11/95 in all classes.
- Establishing procedures for earlier intervention and diagnostic services.
- Including a summary of professionals' reports, summative assessment findings and parents' observations in individual children's files.
- Increasing the availability and range of multidisciplinary support.
- Directing attention to the development of collaborative practices among staff members.
- Engaging in a risk assessment that systematically addresses the sensory and perceptual sensitivities of children with ASDs in relation to lighting, acoustic levels, heating and ventilation systems, and classroom displays and colouring.
- The provision of an adequate level of multidisciplinary support in all schools.
- Allocating parents a central role in the implementation of IEPs in all schools.
- Making use of the Draft Curriculum Guidelines for Teachers of Students with General Learning Disabilities in all classes to facilitate the planning and implementation of the curriculum.
- Employing a greater use of social stories and systematically using an agreed selection of LÁMH signs.
- Structuring class timetables in accordance with the time allocation for each curriculum area.
- Developing the role of ICT in meeting children's needs associated with the triad of impairments and in directly facilitating all curriculum areas.
- Developing a co-ordinated system of curriculum planning and assessment between classes.
- Further developing the school plan in relation to all the elements of ASD provision.
- Adopting reverse inclusion and "buddy systems" as a feature of inclusion policy and practice.

4.5.10   PRINCIPALS' AND TEACHERS' OBSERVATIONS AND COMMENTS IN SPECIAL CLASSES FOR CHILDREN WITH ASDS IN MAINSTREAM PRIMARY SCHOOLS

- All principals and almost all teachers stated that they were satisfied that the curriculum and educational provision met the assessed needs of children with ASDs

- Almost all principals expressed satisfaction that staff members were adequately equipped, in training and teaching experience, to meet the specific needs of children with ASDs

- In almost all schools the involvement of other professionals in the development and review of IEPs was evident

- In one school the complete absence of multidisciplinary support was noted . . . Principals and teachers variously criticised the inconsistent nature of multidisciplinary support

- Parental involvement was stated to be part of the IEP process

- Principals referred to difficulty in obtaining personnel for the classes, inadequate funding for additional resources for classes, difficulties in obtaining access to staff training before the establishment of classes, the health and safety implications during periods when children were included in mainstream classes, and the need for continuous professional development and advisory support for teachers and special-needs assistants

- Concern was expressed that a child might have the same teacher during their career in school and the onerous administrative duties involved in managing a class for a teaching principal

- Reference was made to the positive support provided by the inspector during the evaluation regarding curriculum, policy, and affirmation of practice

- One principal stated that the class had a very positive influence on the school community

- All teachers stated that they were fully involved in the children's IEPs

- The majority of teachers referred to being satisfied that they were equipped, in training and teaching experience, to meet the specific needs of children with ASDs

- All teachers stated that they were either quite familiar or fully familiar with the triad of impairments and the associated implications for the management of behaviour and learning of children with ASDs

- Teachers' referred to the adverse effects of the frequent changes of staff in the multidisciplinary support services

- In particular, the lack of availability of speech and language therapy, occupational therapy and psychology was criticised

- The need for further in-service training for all staff members was cited

- Concern was expressed about the appropriateness of the placement for some children in the classes

- The requirement to engage in fund-raising and the unsatisfactory nature of some classroom accommodation was also criticised

- Reference was made to teachers in Britain receiving additional pay for working in special classes

- A need for art, music and drama therapies was stated, and the provision of advice and support on curriculum issues.

4.6 **Evaluation Phase 5: Children with ASDs included in ordinary classes in mainstream primary schools**

The final phase was an evaluation of typical provision for children with ASDs enrolled in mainstream primary schools. The evaluation was conducted in eight primary schools in different parts of the country. The greatest variable between the schools was size, which ranged from two to twenty-five-teacher schools. Locations varied from isolated rural areas to large towns and cities. Half the children were in multigrade classes. Educational provision for a sample of six boys and two girls in first to fourth classes was evaluated. In each instance an inspector visited the school and carried out a review of relevant documents, observed classroom activity, and discussed provision with the principal, teachers, and special-needs assistants. An eclectic and flexible range of teaching approaches associated with the teaching of the mainstream curriculum was used in meeting the needs of all children in the classes, including those with ASDs.

All the schools were staffed in accordance with the criteria of the Department of Education and Science. In all instances the children with ASDs were allocated at least five hours of resource teaching weekly and a full-time special needs assistant. All the schools had access to a learning-support teacher.

Eight parent questionnaires were returned in respect of the eight children with ASDs included in ordinary classes. Seven principals, seven class teachers and eight resource teachers completed questionnaires.

In all the schools the length of the school day and the school year was determined with reference to the terms of circular 11/95, which states that a full school day in a national school comprises not less than five hours and forty minutes and that a school year comprises a minimum of 183 full school days (Department of Education and Science, 1995).

4.6.1 **Early identification and intervention**

The eight children were aged between seven and ten years. The average age of diagnosis was four, and the average age of enrolment was five.

The poor early intervention and early diagnostic services, which necessitated parents having to obtain private assessments, were criticised. The lack of adequate support services, such as speech and language therapy, occupational therapy, physiotherapy, and psychological services, was a cause of concern. The infrequency of visits by the ASD support team was referred to. Parents also criticised the lack of funding for home-based programmes, the excessive time spent preparing homework in the evenings, and the difficulty involved in gaining an exemption from Irish.

Parents were asked to state the type of health or education service their child was placed in before enrolling in the schools. All children had attended a variety of placements before their enrolment in the schools. They had availed of a combination of part-time and full-time provision that included health-funded pre-school services, private pre-school services, and community-based services.

The children's intellectual functioning was generally in the range of mild general learning disability to average. Three of the eight children had Asperger's syndrome, and one child had severe ASD and was non-verbal. A range of professional reports was available and variously included psychological reports, occupational therapy

reports, and speech and language therapy reports. In all instances the professional reports stated that the children were appropriately placed in mainstream classes. The professionals' reports were considered in the planning and implementation of the children's educational programmes. It would be beneficial to compile an educational profile containing a summary of professionals' reports, assessment findings and parents' observations that relate directly to children's learning and teaching and to provide a copy of this profile to both the class teacher and the resource teacher.

4.6.2   Knowledge and understanding of autistic-spectrum disorders

All members of the teaching staff had recognised professional teaching qualifications. Only a few of the resource and class teachers had specialist qualifications in the learning and teaching of children with special educational needs, and three teachers in all had attended in-service courses related to ASDs. All staff members require specialised in-service training in the learning and teaching of children with special educational needs and ASDs.
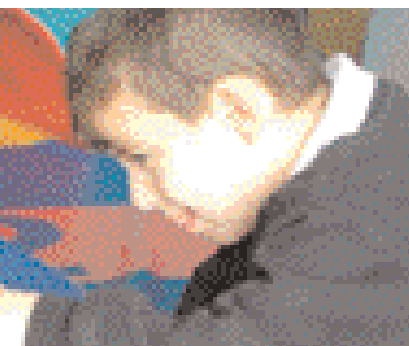
Classroom learning environments were characterised by predictability, structure, and routine. In some instances cognisance was taken of the need to decrease visual, auditory, sensory and acoustic stimulation through adjusting the physical structures and layout of the classroom and creating clearly delineated individual work areas. It would be beneficial to engage in a risk assessment that systematically addresses the sensory and perceptual sensitivities of children with ASDs in relation to lighting, acoustic levels, heating and ventilation systems and classroom displays and colouring in all classrooms. In most instances learning activities were appropriately differentiated to maintain the children's on-task behaviour and independent learning. A need was identified to systematically use children's strengths as visual learners in implementing the curriculum.

There were varying levels of knowledge among principals and class teachers of the social, communication and imagination deficits associated with the triad of impairments and their implications for learning and teaching. Levels of knowledge were higher among resource teachers. In some instances it was observed that liaison between class teachers and resource teachers with regard to learning programmes and teaching strategies could be improved. Staff-children interactions were supportive and affirmative.

4.6.3   Multidisciplinary assessment and support

Access to psychological and therapeutic support services from the National Educational Psychological Service and the Health Service Executive varied from school to school. All the principals in the mainstream schools were satisfied with the psychological support provided by the NEPS. In some instances therapeutic support was regular and consistent, while in others it was sporadic or non-existent. In schools that were well supported, a positive impact on educational provision for children with ASDs was observed.

The inadequate level of access to support services, such as the speech and language therapy, occupational therapy, physiotherapy, social work services and psychological services, was criticised by parents.

Half the parents stated that they were either dissatisfied or very dissatisfied and half that they were either satisfied or very satisfied with the procedures and processes for the diagnosis and assessment of ASDs. (See fig. 14.)
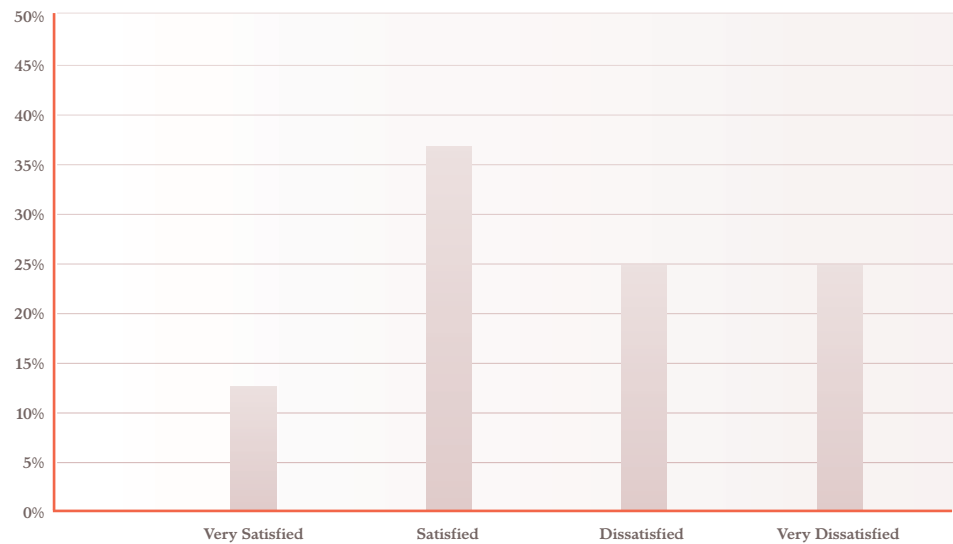
Fig. 14: **Parents' satisfaction with diagnostic and assessment processes and procedures in ordinary classes in mainstream primary schools**

In addition to providing structured, individualised additional teaching in literacy and numeracy, most resource teachers exercised a wider role in relation to liaison with relevant professionals and parents and adopted a leading role in devising strategies to address the social and communicative deficits of the triad of impairments and in promoting appropriate behaviour.

4.6.4   **Parental involvement**

All the schools promoted regular two-way contact between home and school and articulated an open-door policy in relation to initiating and maintaining contact with parents. In almost all the schools the parents were involved to some degree in the development, implementation and review of the children's IEPs. Home-school journals, formal and informal parent-teacher meetings and parents' roles in IEPs assisted in facilitating parental involvement.

Fig. 15 illustrates the level of parental involvement in children's IEPs, which varied from five being fully or quite involved to three being involved to some extent or not at all. It is recommended that a central role in the compilation, implementation and review of IEPs be allocated to parents, and that this role be defined in school planning documents.
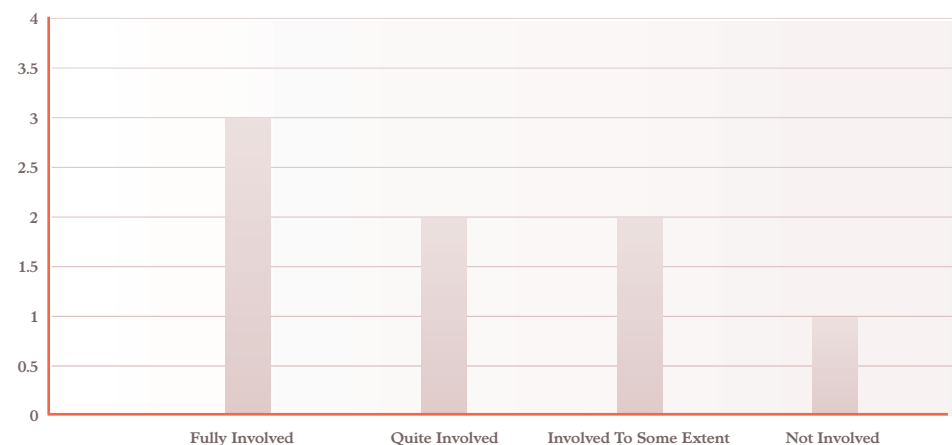

Fig. 15: **Parental Involvement in children's individual educational programmes in ordinary classes in mainstream schools**

Parents' comments showed a high level of satisfaction with their child's placement in the ordinary class in the mainstream school. They referred to the positive impact of the resource teacher on children's learning and teaching and to the critical importance of the support of the special-needs assistant. The emphasis on nurturing the child's potential was commended, and parents referred to children's progress in relation to cognitive and academic achievement, development in relation to behaviour and social and communication skills, and the child's enjoyment of school. The positive impact of including the child in learning and teaching experiences with non-ASD peers was referred to. The dedication and commitment of staff members in meeting the needs of the children was praised. One parent commended the availability of multidisciplinary support and referred to the benefits of the team working together to meet the child's needs.

Parents were asked to identify the extent to which different factors were instrumental in their decision to enrol their child in an ordinary class in a mainstream school. The factors that exerted a very high or a high level of influence on a considerable number of parents were the provision of an IEP, satisfactory accommodation and facilities, one-to-one attention for children, staff members' respect for children and an understanding of their disability, the wish to have the child educated in the local mainstream school, and the accessibility of the service.

4.6.5   **Access to an appropriate curriculum**

All children had access to all subject areas of the Primary School Curriculum. These included Irish, English, mathematics, social, environmental and scientific education (SESE), social, personal and health education (SPHE), music, visual arts, drama, and physical education. The Draft Curriculum Guidelines for Teachers of Students with General Learning Disabilities were used in a few schools to augment the implementation of the curriculum. In all instances staff members were familiar with the principles and the rationale of the Primary School Curriculum and demonstrated a knowledge of the integrated nature of the curriculum and of children's learning. Curriculum-related displays, support areas and the retention of samples of completed work assisted in consolidating children's experiences of the curriculum in all classes.

The children were provided with a balanced range of individual work, group work, class work, and structured opportunities for social interaction. In the majority of instances teaching approaches were adapted to meet the needs of children with ASDs through the creation of predictability, structure and routine in the classroom learning environment, promoting the development of social, communication and imagination skills in a cross-curricular manner, assisting the special-needs assistant in mediating the teacher's instructions and directions, and developing shared attention, turn-taking, active listening, topic introduction, maintenance and change during group activities. The children's social, communicative and imaginative skills were developed through the broad range of curriculum experiences that were available. Where appropriate, the introduction of an agreed selection of signs from the LÁMH signing system would further assist in augmenting children's language and communication skills. In most instances staff members had some understanding of the implications of the triad of impairments for children's learning and teaching.

The children's behaviour was appropriately and sensitively managed. Preventive strategies that were used effectively included an acknowledgement of the communicative function of behaviour, the provision of clear physical and visual

boundaries in the classroom environment, the minimising of visual and auditory distractions, and the development of clearly delineated individual work areas.

A wide range of teaching resources, including audio-visual equipment and ICT, was available in all the schools and was used effectively to facilitate the learning and teaching of children with ASDs. ICT was used productively to facilitate the teaching of the curriculum, particularly in the areas of literacy and numeracy, both in the classroom and during one-to-one instruction from the resource teacher. Consideration could be given to using ICT in facilitating curriculum development in other areas of the curriculum and in meeting children's needs associated with the triad of impairments.

Eighty-seven-and-a-half per cent of parents stated that they were either very satisfied or satisfied that the curriculum being implemented in the ordinary class met their child's assessed needs, while twelve-and-a-half per cent reported dissatisfaction. This dissatisfaction was stated to be based on the lack of additional therapies, in particular speech and language therapy and programmes in daily-living skills. No parent was very dissatisfied with the curriculum. (See fig. 16.)
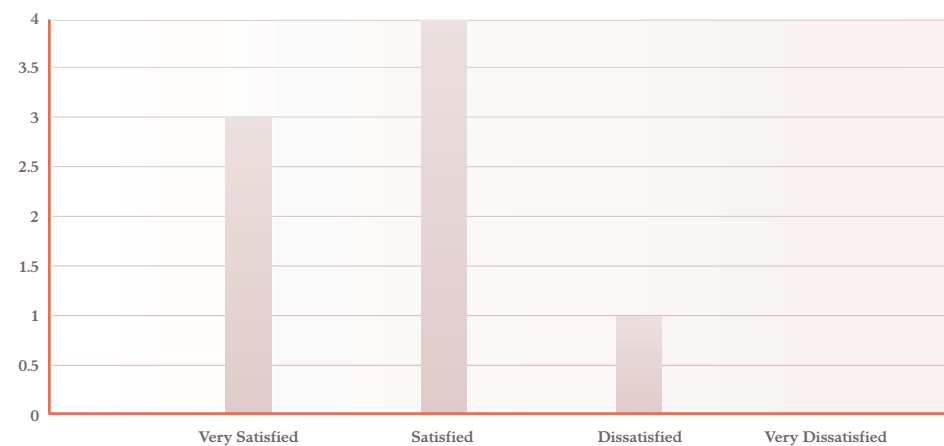
Fig. 16: Parents' satisfaction that the curriculum meets children's assessed needs in ordinary classes in mainstream schools

Seven parents stated that their children were not pursuing home-based programmes either before or during their current enrolment in the school. One parent stated that the child was receiving between five and six hours of a home-based programme both before and during the present school placement. The source of funding for this programme was not stated.

4.6.6   **Co-ordinated approaches to curriculum planning and implementation**
A school plan as required by the Education Act (1998) was available in all the schools. The schools' educational philosophy and aims and how they proposed to achieve them were detailed in the school plans. A range of policy and practice documents, arrangements for the planning, implementation and teaching of the

curriculum and the organisation of the schools' resources were included in the school plans. Almost all the schools had developed coherent policies in relation to children with special educational needs. However, in no case was a specific reference made to the aims and objectives of the ASD provision, the triad of impairments, the implications of ASDs and general learning disability for learning and teaching, the enrolment policy for children with ASDs, the services available, a commitment to staff training and development, teaching approaches, or the management of behaviour in relation to children with ASDs.

The school plan and the Primary School Curriculum beneficially informed the teachers' long-term and short-term planning for children's learning and teaching programmes. Resource teachers engaged in specific programme planning for children with ASDs, and in some instances planning specifically referred to the triad of impairments. In most instances IEPs were devised regularly in consultation with the class teacher, parents, and relevant members of the multidisciplinary assessment and support team. It is recommended that IEPs be regularly devised, implemented and reviewed in all schools.

Attention was directed to regularly assessing, monitoring and recording all children's progress, including those with ASDs. A range of assessment procedures, including teacher-observation, check-lists, teacher-designed tasks, the retention of samples of completed tasks, multidisciplinary assessment, progress reports, consultation with parents, standardised tests, reading logs and screening tests for ASDs were variously used by both class teachers and resource teachers to inform the children's learning and teaching programmes. Resource teachers adopted a leading role in recording individual children's progress. In some instances the recording of individual children's progress was a collaborative exercise, involving resource teachers, class teachers, and special needs assistants. Some of the approaches to assessment and record-keeping observed were included in the school plan.

4.6.7   Inclusion opportunities

All the schools actively promoted the inclusion of children with ASDs in curricular, co-curricular and extracurricular activities. Inclusion was based on a detailed consideration of each child's readiness to engage in a particular activity and was sensitively and carefully managed.

In most instances forms of "buddy systems" existed to assist children with ASDs during unstructured periods of the school day. The benefits of such systems should be considered and adopted as a feature of inclusion policy and practice in all mainstream schools in the future.

4.6.8	**Positive features of practice in ordinary classes in mainstream primary schools**	• All staff members had recognised teaching qualifications. • Professionals' reports were considered in the planning and implementation of the children's education programmes. • In some schools the children's sensory and perceptual sensitivities were accommodated. • Staff-children interactions were supportive, affirmative, and encouraging. • Multidisciplinary support contributed in a positive manner to the children's programmes. • All the principals were satisfied with the psychological support provided by the NEPS. • The involvement of parents in their children's education was promoted and facilitated. • Parents' satisfaction that the educational provision met the children's needs was high. • Staff members were familiar with the principles and subject areas of the Primary School Curriculum. • The children had access to a broad and balanced variety of the strands and strand units of the subject areas of the Primary School Curriculum. • The children were provided with a balanced range of individual work, group work, class work, and structured opportunities for social interaction. • In most of the schools staff members had some knowledge of the implications of the triad of impairments for children's learning and teaching. • The children's behaviour was appropriately and sensitively managed. • A wide selection of teaching resources was available to facilitate the children's learning. • ICT was used effectively to facilitate the teaching of the curriculum in the areas of literacy and numeracy. • A school plan as required by the Education Act (1998) was available in all the schools. • The children's progress was regularly assessed, monitored, and recorded. • Resource teachers adopted a leading role in planning and implementing the children's learning and teaching programmes, recording individual children's progress, and liaising with parents and relevant professionals. • All the schools actively promoted the inclusion of children with ASDs in curricular, co-curricular and extracurricular activities.

4.6.9

Areas for development in ordinary classes for children with ASDs in mainstream schools	• Establishing procedures for earlier intervention and diagnostic services.
	• Providing specialised in-service training for staff members in the range of specific approaches to the learning and teaching of children with ASDs and special educational needs.
	• Engaging in a risk assessment that systematically addresses the sensory and perceptual sensitivities of children with ASDs in relation to lighting, acoustic levels, heating and ventilation systems, and classroom displays and colouring.
	• Including a summary of professionals' reports, summative assessment findings and parents' observations in individual children's files.
	• Consistently differentiating children's learning activities to optimise task engagement.
	• Incorporating children's strengths as visual learners as an essential element in the teaching of the curriculum.
	• Improving liaison between class teachers and resource teachers with regard to learning programmes and teaching strategies.
	• Increasing the availability and range of multidisciplinary support.
	• Allocating parents a central role in the implementation of IEPs in all schools, and defining this role in school planning documents.
	• Making use of the Draft Curriculum Guidelines for Teachers of Students with General Learning Disabilities in all classes to facilitate the planning and implementation of the curriculum.
	• Consistently using an agreed selection of signs from the LÁMH signing system as required.
	• Developing the role of ICT in meeting children's needs associated with the triad of impairments and in directly facilitating all areas of the curriculum.
	• Further developing the school plan in relation to all the elements of ASD provision.
	• Defining the approach to the assessment, monitoring and recording of children's progress in the school plan and regularly devising, implementing and reviewing IEPs in all schools.
	• Adopting "buddy systems" as a feature of inclusion policy and practice in all schools.

4.6.10 PRINCIPALS' AND TEACHERS' OBSERVATIONS AND COMMENTS IN ORDINARY CLASSES IN MAINSTREAM PRIMARY SCHOOLS

- Most principals and resource teachers and all class teachers expressed satisfaction that the curriculum and educational provision in the school met the assessed needs of children with ASDs

- The majority of principals were not satisfied that staff members were adequately equipped, in training and teaching experience, to meet the specific needs of children with ASDs

- Almost all the schools noted some involvement of other professionals in the development and review of IEPs

- Parental involvement was stated to be part of the IEP process

- All the principals were satisfied with the availability of the support provided by the psychological services

- Principals, class teachers and resource teachers variously criticised the variable nature of other multi-disciplinary support, such as occupational therapy and speech and language therapy

- One principal remarked that the children with ASDs in the school were catered for well and were integrated, content, and happy

- Concern was variously expressed by principals, class teachers and resource teachers about the importance of providing special-needs assistants for children, the need for in-service training and an advice and support service for all teachers, the lack of provision of art, drama and muisc therapy, and the need for a satisfactory level of funding to acquire resources for the children

- One teacher who had a postgraduate diploma in special education articulated a need for additional training to meet the specific group needs of children with ASDs

- The positive impact of special needs assistants in facilitating the school in meeting the needs of children with ASDs was affirmed by principals, class teachers, and resource teachers

- All class teachers reported that they were quite involved, involved to some extent or fully involved in the IEP process

- A few learning-support teachers and almost all resource teachers were fully involved in the IEP process

- The majority of class teachers were not satisfied that they were equipped, in training and teaching experience, to meet the specific needs of children with ASDs

- The majority of resource teachers were satisfied that they were equipped, in training and teaching experience, to meet the specific needs of children with ASDs

- The majority of class teachers stated that they were familiar to some extent or quite familiar with the triad of impairments and the associated implications for the management of behaviour and learning of children with ASDs

- The children were referred to as making progress and being happy in their mainstream class placements.

Chapter 5 SUMMARY AND CONCLUSION

Chapter 5   Summary and Conclusion

5.1   Introduction

In this chapter the main findings of the evaluation are considered. It is important to point out that this evaluation of provision was not intended as a comparative one but as an attempt to review the range of provision that is made for pupils with autistic spectrum disorders (ASDs), to identify good practice in different settings, and to affirm the efforts made by all staff members in providing for pupils with ASDs. The findings in relation to each phase of the evaluation demonstrated particular strengths as well as areas for development associated with the different forms of educational provision. While there were some clear differences between the various settings, for example in pupils' access to a broad curriculum and in teachers' qualifications, there were many features in common. Based on these findings, and on the elements of good practice identified in the literature review, recommendations are made as a contribution to policy development and to continuing improvement in the quality of education that is available to children with ASDs.

5.1.1   Early identification and intervention

The children's place of residence and the ability of parents to pay for private assessments emerged as significant factors influencing whether children had access to early identification and intervention services. On average, a diagnosis of ASD was made in all settings while children were between three and four years of age. Almost all the children had availed of a combination of part-time and full-time provision before enrolling in the various settings. This provision included health-funded pre-school services, private pre-school services, special or mainstream schools, and state-funded home programmes. In general, children obtained access to ASD-specific early intervention services between four-and-a-half and six years of age. Most parents stated that they were either very dissatisfied or dissatisfied with the procedures and processes for the diagnosis and assessment of ASDs.

As with other developmental disorders, the earlier ASDs can be identified the earlier support can be given to the child and the parents. Children with ASDs require early identification and diagnosis to equip them with the basic attending and engagement, imitation, communication and play skills to optimise the benefits of subsequent educational provision. Early intervention can deal with such basic skills as cause-and-effect reasoning and complying with instructions, and behaviour problems may be minimised or avoided through the early establishment of appropriate behaviour management strategies. Early intervention appears also to reduce the later costs of educating children, and there is no doubt that the parents of children with ASDs need the assistance provided.

The benefits of early identification and intervention are recognised by parents and professionals alike. While it is possible to identify ASDs by the time a child is eighteen months old, ASDs are seldom identified until after the age of twenty-four months. It is important therefore that health and education authorities ensure that their structures and agencies are organised for the early identification of ASDs, and that relevant professionals are alert to the signals of possible ASDs. It is acknowledged that it may be difficult to distinguish ASDs from other special educational needs, such as severe general learning disabilities or specific speech and language disorders, in very young children. It is advisable in such cases that children are closely monitored until a final diagnosis is made, and that in the interim intervention programmes are established in accordance with children's identified needs.

It is clear from this evaluation that parents are dissatisfied with the services that exist for the early diagnosis of ASDs and that, in their view, intervention does not happen quickly enough. A number of studies suggest that, for children with ASDs aged between two and three years, a diagnosis made by experienced clinicians is both stable and reliable (Charman et al., 2005; Lord, 1995; Stone et al., 1999;). Every effort should be made, therefore, to ensure that children with a possible ASD are identified no later than in their third year, and that intervention services should then be provided without undue delay.

It is recommended that procedures and services be developed by health and education authorities to ensure early identification and intervention in relation to all children with ASDs. It is recommended that a comprehensive, multidisciplinary team approach to conducting an assessment of children with ASDs be made available. The team should be knowledgeable about ASDs and could include, as required, a psychologist, a speech and language therapist, a child psychiatrist, an occupational therapist, a social worker, a behaviour management specialist, and a paediatrician. It is recommended that the assistance of a psychologist from the National Educational Psychological Service and of a teacher with expertise in the area of ASDs be available also if required. The assessment should result in a statement of the nature and extent of the child's therapeutic and special educational needs and should specify what services and supports the child requires in order to have those needs effectively met. The statement of the findings of the assessment, and any other relevant documents relating to the assessment, should be made available immediately to the parents of the child. Arrangements should be made for the drawing up of an ASD-specific education plan for the child that, with the parents' agreement, will lead to the provision of not less than fifteen hours per week if the child is under four years of age and provision with full school attendance if the child is of school-going age. The special educational needs of the child, as identified in the education plan, and consideration of the informed choice of parents should determine the setting for the child's education.

5.1.2   **Goals of education and the curriculum**

The National Research Council (2001) states that personal independence and social responsibility are appropriate goals for the educational services for all children, including children with ASDs. These goals imply progress in social and cognitive abilities, verbal and non-verbal communication skills and adaptive skills, a reduction in behavioural difficulties, and the generalising of abilities within multiple environments.

It is acknowledged that children with ASDs have diverse needs and learn best in diverse settings. Access to the curriculum must therefore be carefully planned in accordance with each child's individual strengths and needs, as identified through a multidisciplinary and comprehensive assessment. From an examination of the literature it is clear that the curriculum for children with ASDs should address the triad of impairments, accommodate the special educational needs of the child arising from a general learning disability or a co-occurring difficulty (such as attention-deficit hyperactivity disorder, dyspraxia, oppositional defiant disorder, receptive and expressive language disorders, or specific learning disability), attend to developmental and adaptive needs, address the management of behaviour that interferes with children's learning, and provide curricular experiences that are concerned with the holistic development of each child.

Children in ABA centres had access to a curriculum based on a number of content areas, including attending skills, receptive and expressive language, fine and gross motor skill development, daily living and social skills, literacy and numeracy, and the management of maladaptive behaviour. Access to the content of the curriculum was provided in a hierarchical sequence that ranged from the least difficult component of the task to the most difficult. The children's curricular programmes were predominantly implemented through discrete trial training in individual teaching sessions, with less emphasis on promoting group and class teaching. The length of the school day and the school year in ABA centres accommodated an increased intensity, frequency and duration of intervention.

The management of behaviour in ABA centres was comprehensive and effective and was a positive feature of the centres. The emphasis was on modifying children's behaviour in accordance with the principles of ABA. Staff members applied these principles in a consistent and systematic manner. The environmental variables that may underlie the behaviour were examined in context, the antecedents and consequences that maintain the behaviour were identified, and an intervention was devised according to each child's identified behaviour pattern. There were clear policies and procedures for dealing with the management of challenging behaviour.

A negative feature of the ABA settings was that the children did not obtain access to a balanced variety of the strands and strand units of the Primary School Curriculum in the subject areas of English, mathematics, social, environmental and scientific education (SESE), social, personal and health education (SPHE), music, visual arts, drama, and physical education. The integrated nature of the Primary School Curriculum and of learning was not a central element of the children's access to the curriculum. Children in all other educational placements had access to a curriculum based on the subject areas of the Primary School Curriculum that was in almost all cases augmented by the Draft Curriculum Guidelines for Teachers of Students with General Learning Disabilities (National Council for Curriculum and Assessment, 1999, 2002). They were therefore provided with a broad and relevant range of curriculum experiences that was designed 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.

An emphasis on fostering skill domains in attending to elements of the environment, imitating others, comprehending and using language, play, adaptive and life skills and developing communication and social interaction was evident in the planning and implementation of the Primary School Curriculum. The children were provided with a balanced range of individual work, group work, class work, and structured opportunities for social interaction. The schools' codes of discipline and behaviour were based on a rationale that promoted the uniqueness of each individual child and articulated a positive approach to behaviour management.

Adult-child interactions were characterised by a sense of mutual respect and understanding of the implications of ASDs, general learning disability and co-occurring difficulties for children's learning, teaching, and social interaction. Positive child-child interactions were consistently developed and fostered in all curricular activities and break periods. Attention was directed towards developing communicative skills, such as listening and responding, turn-taking, joining in, seeking assistance, interpreting facial expressions, apologising and understanding

gestures in incidental, naturalistic and experiential settings. Behavioural skills, such as expressing feelings appropriately and engaging in responsible behaviour, and self-care skills were regularly addressed.

A wide selection of teaching resources and audio-visual equipment was used to facilitate the implementation of the curriculum in all educational placements. In all settings the children demonstrated an understanding of the adults' high expectations with regard to the independent completion of tasks and appropriate behaviour and willingly accepted adult guidance and advice.

It is recommended that all children with ASDs be 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 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 each child. It is further recommended that modules related to the management of behaviour be included as an essential component of any in-service training provided in the future for teachers in the teaching of children with ASDs.

5.1.3 Staff members' professional qualifications, training, and development

The features of ASDs and general learning disabilities have significant implications for approaches to education and intervention. It is essential that staff members have a knowledge and understanding of general pedagogical principles and, in particular, that these pedagogical principles and approaches be appropriate for teaching children with ASDs and general learning disabilities. It is useful to consider the views of the National Research Council, which states:

> Teachers and other professionals and paraprofessionals who often provide the bulk of service to very young children need familiarity with the course of ASDs and the range of possible outcomes and with many methods that fit into best practices. Specific problems in generalisation and maintenance of behaviours also affect the kind of training needed, as does the wide range of IQs and verbal skills associated with ASDs, from profound mental retardation and severe language impairments to high intelligence (National Research Council, 2002, p. 8).

Similar views are expressed in the National Autism Plan for Children.

> Training should include issues related to understanding ASD and not be limited to single intervention training (National Initiative for Autism Screening and Assessment, 2003, p. 15).

The observations of the Task Force on Autism are also of interest here.

> With regard to the content of teacher training and education, the main theme was that teachers should be equipped with the knowledge of all currently recognised methodologies, so that they can select the approach or mix of approaches most suited to the needs of the student at any given time (Department of Education and Science, 2001, p. 268).

Teaching qualifications were not required of staff members in ABA centres, and few had a recognised teaching qualification, while none had completed a postgraduate course in the learning and teaching of children with special educational needs. While the ABA approach was implemented in an intensive and consistent manner in those

settings, staff members in general were less familiar with the range of approaches to the learning and teaching of children with ASDs that has been developed.

Staff members in all other educational provision had recognised professional teaching qualifications. Most of those in special schools for children with ASDs, special schools for children with general learning disabilities and special classes in mainstream schools were familiar with a range of approaches to the learning and teaching of children with ASDs and special educational needs. These teachers used approaches that included the picture exchange communication system (PECS), the treatment and education of autistic and related communication-handicapped children (TEACCH), applied behaviour analysis (ABA), social stories, the Hanen approach, the LÁMH signing system, sensory integration techniques, and floor time. Only a few of the resource and class teachers in mainstream schools who were working with individual children with ASDs had a specialist qualification in the learning and teaching of children with special educational needs or had attended in-service courses related to ASD.

It is recommended that those involved in implementing learning and teaching programmes for children with ASDs should have a recognised teaching qualification. It is further recommended that all teachers who work full-time with pupils with ASDs should attend an autism-specific course of not less than 450 hours and should also have access to courses on the various approaches, such as TEACCH, ABA, and PECS. In particular it is recommended that the in-service training needs of resource teachers and mainstream class teachers be addressed within these arrangements.

Appropriate training courses to meet the requirements of special needs assistants who support teachers in teaching pupils with ASDs should also be arranged.

5.1.4   **Staff members' knowledge and understanding of autistic spectrum disorders**
It is clear that staff members' knowledge and understanding of the qualitative impairments in patterns of reciprocal social interaction, communication and imagination and of the sensory and perceptual development associated with ASDs are critical to the effective implementation of education programmes for children with ASDs.

Qualitative impairments in reciprocal social interaction have a significant impact on the manner in which children with ASDs arrive at an understanding of themselves and the world around them. A lack of awareness of cultural norms, an absence of social perceptiveness, an unawareness of the concept of "shared attention," atypical use of eye contact and a lack of empathy with the feelings of others are among the qualitative social impairments associated with ASDs. Children with ASDs will therefore require direct teaching of social skills and of the rules that govern social behaviour.

The absence of meaningful communicative intent, difficulties in interpreting verbal and non-verbal expressions and gestures, confusion with the semantic and pragmatic aspects of language, literal understanding, speech patterns characterised by echolalia, metaphorical language, neologisms and pronoun reversals are among the communication difficulties experienced by children with ASDs. A programme for such children should therefore include strategies that help the child to understand the purpose and value of communication. It should address the social aspects of language, such as turn-taking, active listening, topic introduction, maintenance, and change. It should also incorporate the direct teaching of gestures,

facial expression, vocal intonation and body language and use visual material or signing to facilitate the child's communicative initiations and responses. A clear and unambiguous language of instruction is also necessary.

Children with ASDs exhibit qualitative impairments in imagination, which lead to rigid thought and behaviour patterns, a restricted repertoire of activities and interests, and ritualistic play. An education programme for children with ASDs, therefore, will need to include structured and purposeful opportunities for the children to develop creativity and imagination. They must be supported in coping with new and varying activities in order to pre-empt the anxiety that results from being presented with unstructured or unfamiliar situations.

Sensory and perceptual impairments can lead to an under-sensitivity or over-sensitivity to noise, smell, taste, light, touch, or movement, to fine or gross motor difficulties, to poor organisational skills, and to difficulties in managing the time and sequence of activities. Adjustments must be made to the classroom to address the child's under-sensitivity or over-sensitivity to sensory stimuli. Structured and systematic programmes for developing the child's gross or fine motor skills should be implemented. The use of clear directional signs indicating specific areas of activity and the consistent use of visual timetables and work systems assist in pre-empting the apprehension children with ASDs experience with the abstract nature of time.

Children with ASDs exhibit severe difficulty in generalising learnt skills to real-life situations. It is critical, therefore, that structured opportunities for generalisation be provided through incidental, naturalistic and experiential learning and teaching situations. It is to be observed that incidental, naturalistic and experiential learning are important principles of the Primary School Curriculum and of the Draft Curriculum Guidelines for Teachers of Students with General Learning Disabilities (National Council for Curriculum and Assessment, 1999, 2002).

Children with ASDs exhibit particular strengths in visual processing, reliance on rote memory routines, and the adoption of areas of special interest. It has long been instructional practice to teach to pupils' strengths, and this is particularly important for pupils with ASDs.

Some accommodation of the triad of impairments was evident in the implementation of the curriculum by staff members in ABA centres. Some cognisance was taken of the children's strengths as visual learners, and some attention was directed towards addressing the sensory and perceptual sensitivities of children with ASDs. There was little evidence, however, that the children were afforded opportunities to generalise skills learned through the provision of incidental, naturalistic and experiential learning and teaching contexts.

In the majority of other educational placements, staff members had an explicit knowledge of the implications of the triad of impairments for children's learning and teaching programmes, and due attention was directed towards acknowledging the visual learning strengths of children with ASDs and in addressing their sensory and perceptual sensitivities. In almost all these settings the children were provided with structured opportunities for generalising skills learned through the provision of incidental, naturalistic and experiential learning and teaching situations.
All settings acknowledged the strengths of children with ASDs related to reliance on rote memory routines and the adoption of special interests. All placements would

benefit from engaging in a focused risk assessment that systematically addresses the sensory and perceptual sensitivities of children with ASDs in relation to lighting, acoustic levels, heating and ventilation systems, classroom displays, and colouring.

It is recommended that all staff members engaged in the education of pupils with ASDs should, through an ASD-specific training course, acquire a deep understanding of the triad of impairments associated with ASDs and of the learning difficulties they create for the child. They should also know about the co-morbid difficulties often associated with ASDs, such as general learning disability and sensory and perceptual difficulties, and how they may add to the children's learning difficulties. Teachers should be aware of the strengths these children have as visual learners and of their need for structure and predictability.

It is also recommended that comprehensive teacher training be a combination of theoretical and practical work that would enable teachers, in their programmes, to accommodate effectively the children's learning strengths and weaknesses.

5.1.5   Accommodating general learning disabilities and other co-occurring difficulties in planning and implementing programmes

The Report of the Special Education Review Committee (SERC Report) states that some seventy-five per cent of children with ASDs are within the range of general learning disability in intelligence tests (Ireland, 1993). Peeters (1997) observes that sixty per cent of those with ASDs have an IQ below fifty It is critical, therefore, that the impact of children's general learning disabilities and co-occurring difficulties be considered when an education programme for children with ASDs is being planned.

Children with general learning disability have special educational needs because of delayed conceptual development, slow speech and language development, a limited ability to abstract and generalise, a limited attention span, and poor retention ability. A number of children may exhibit poor adaptive behaviour, inappropriate or immature personal and social behaviour, low self-esteem, emotional disturbance, and poor fine or gross motor co-ordination. They have difficulties in acquiring basic literacy and numeracy skills. Children with a severe to profound general learning disability are 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 children's 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.

During the evaluation, children with ASDs were also observed to have such co-occurring difficulties as attention-deficit hyperactivity disorder (ADHD), dyspraxia, oppositional defiant disorder, receptive and expressive language disorders, specific learning disability, and attachment disorder. It is critical that staff members have a knowledge and understanding of the implications of these co-occurring difficulties for children's learning and teaching programmes.

In almost all school settings, due consideration was given to the implications of ASDs, general learning disabilities and co-occurring difficulties for children's learning and teaching. The Draft Curriculum Guidelines for Teachers of Students with General Learning Disabilities (National Council for Curriculum and Assessment, 2002) were constructively used to augment children's access to the curriculum in the majority of educational placements other than ABA centres. While detailed

individual educational programmes were implemented in ABA centres, the implications of ASDs, general learning disabilities and other co-occurring difficulties were not explicitly accommodated in curriculum planning and implementation.

It is recommended that the implications of ASDs, general learning disabilities and co-occurring difficulties be expressly considered when learning and teaching programmes for children with ASDs in all educational placements are being devised.

It is recommended that all centres and schools refer to the Draft Curriculum Guidelines for Teachers of Students with General Learning Disabilities when children's education programmes are being planned (National Council for Curriculum and Assessment, 2002).

5.1.6 Parental and family involvement

It is acknowledged that children with ASDs require consistent support within school and home environments in order to make optimal educational progress. The difficulties experienced by children with ASDs in transferring skills learned in the school to other situations need to be anticipated and dealt with, and therefore the parents and families of children with ASDs need to be closely involved in the children's education programmes. Parents possess important information about the child with ASD, which can contribute greatly to the learning and teaching process and promote shared understandings with professionals. Parents and families should be allocated a central role in the education of children with ASDs in order to foster consistency and consolidate learning in all environments. Through parent courses and opportunities to observe the work with the children in school, parents can be taught techniques and strategies for teaching adaptive skills, managing behaviour, and promoting access to the curriculum. It is important that parents be provided with both initial training and continuing support to ensure that their confidence and skills in supporting their children are maintained and consolidated.

A commendable emphasis was placed in ABA centres on the importance of parental involvement. Parents had access to continuing support and training from the centres and were provided with regular information about their children's progress. In other educational placements the involvement of parents in their children's education was acknowledged, promoted and facilitated through, among other things, the use of home-school journals, involvement in the children's IEPs, parent-teacher meetings, and the provision of progress reports.

A high level of satisfaction by parents with the education being provided was evident in all the educational placements evaluated.

It is recommended that policy and planning documents in all settings acknowledge and define the central role of parents in the education of children with ASDs.

It is further recommended that parents in all settings be provided with initial training and continuing support with regard to the range of techniques and strategies for teaching adaptive skills, managing behaviour and promoting access to the curriculum for children with ASDs.

5.1.7 Whole-school planning

Effective schools clarify their aims and objectives and engage in corporate, collaborative and comprehensive planning to achieve them. Co-ordinated

approaches to curriculum planning and implementation are particularly important for children with ASDs, as consistency of approach is critical in providing learning and teaching programmes for these children. The important role that school planning can play in promoting school effectiveness is recognised in the Education Act (1998), which makes it incumbent on all boards of management to arrange for the preparation, dissemination and review of a school plan.

No school plans as defined in the Education Act (1998) were available in ABA centres. However, planning for individual children's education programmes was systematic, coherent, and detailed, and cohesive links between long-term planning, short-term planning and classroom practice were evident. Policy documents defined the procedures and routines for the efficient daily operation of the centres and for the implementation of the curriculum.

A school plan was available in all other educational provision and defined the schools' educational philosophy and aims, and how they proposed to achieve them. The school plans defined the planning, implementation and teaching of the curriculum and the organisation of the schools' resources and contained a range of policy and practice documents. In almost all instances coherent links between the content of the school plan and the teachers' long-term, short-term and individualised planning were evident.

It is recommended that all schools and centres providing for the education of pupils with ASDs have a school plan in keeping with the requirements outlined in the Education Act (1998). It is recommended that the following elements of provision for children with ASDs be defined in the school plan:
- reference to the enrolment policy for children with ASDs
- the services available
- the aims and objectives for ASD provision
- the implications of the triad of impairments, general learning disability and other co-occurring difficulties for children's learning and teaching
- the rationale for the use of particular approaches to the learning and teaching of children with ASDs
- the management of behaviour in relation to children with ASDs
- the commitment to staff training and development.

Reference to an agreed whole-school approach to curriculum planning, individual planning and assessment policies should also be included in the school plan.

5.1.8   **Individual planning**
While a child's developmental profile is consonant with a particular diagnostic category, individual children and their families nevertheless require an individualised programme based on the child's specific motor, sensory and cognitive patterns as well as their strengths, resources, and concerns. The careful documenting of a child's unique strengths and weaknesses can have a significant impact on the design of effective intervention programmes and is particularly critical because of the unusual developmental profiles common in children with ASDs. The identification of clear short-term and long-term goals for learning and teaching and the continual monitoring and evaluation of provision facilitate best practice. Curriculum differentiation and the compiling of IEPs provide a structure for the systematic planning and evaluation of learning programmes for children with ASDs.

Planning for the children's individual learning and teaching programmes in ABA centres was systematic, coherent, and detailed. All the centres compiled IEPs, though the links between the data supplied in assessment reports on children and their resulting IEPs were not always obvious. These IEPs were constructively used in monitoring the children's performance and progress through the use of methodical data tracking. The children's IEPs contained long-term plans of work in areas of the curriculum, which defined the skills to be learned, the tasks to be undertaken, and the corresponding behavioural objectives.

Curriculum differentiation and IEPs formed the basis for individual planning in almost all other educational placements. In most instances the IEPs variously contained a summary of the sources of available formal and informal information regarding the child, the child's strengths and learning needs, medical and dietary information, and a review date. Priority needs were identified in respect of each child, and associated long-term learning goals and short-term targets were identified. The curriculum area to which the identified target related was defined, and the teaching methods and strategies to be used were outlined. In the majority of instances the contribution of other professionals and parents was also described. Children's curriculum experiences were appropriately differentiated to meet their individual learning and teaching needs. Differentiation was implemented with regard to the level and pace of the lesson, the children's identified interests, their responses, the structure and sequence of lessons, mode of questioning, teaching approaches, and use of resources.

It is recommended that all children with ASDs have appropriate IEPs that promote parents' participation and, where possible, include the child with ASD in the IEP process. The IEP should outline the objectives set for the pupil that are specific to his or her needs arising from the ASD, general learning disability and any other co-occurring difficulties and, in addition, the access the pupil will have to a broad and balanced curriculum. It is further recommended that the recommendations of the National Council for Special Education with regard to IEPs be considered in all individual planning for children with ASDs.

It is recommended that training that emphasises the development of collaborative practice be provided for teachers in the compiling, implementing and review of IEPs.
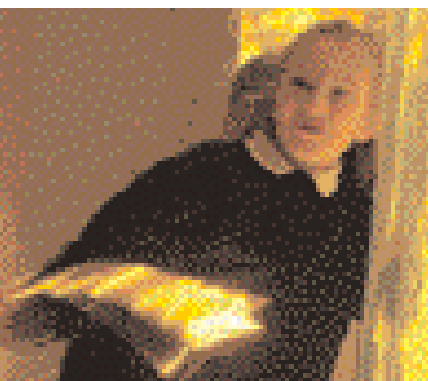
5.1.9   **Assessment**
The Primary School Curriculum and the Draft Curriculum Guidelines for Teachers of Students with General Learning Disabilities affirm the role of assessment as an integral element in curriculum planning and provision for all pupils (National Council for Curriculum and Assessment, 1999, 2002). Assessment is an essential component of an effective learning and teaching process. The four purposes of assessment have been identified as formative, diagnostic, summative, and evaluative. Formative assessment recognises the pupil's strengths, needs and potential and uses this information to plan the appropriate next steps in the child's education programme. Diagnostic assessment is concerned with scrutinising and classifying learning difficulties in order to provide appropriate remediation and support. Summative assessment systematically records a pupil's overall achievement, while evaluative assessment reports on discrete elements of the education system.

An assessment framework for pupils with ASDs should take cognisance of the need to reflect the four purposes of assessment and make use of a wide range of

assessment tools, ranging from informal classroom-based assessments to more formal standardised tools. A continuum of assessment could include the use of homework, teacher-observation of pupils' activities, anecdotal notes, teacher-devised check-lists, teacher-devised tests, curriculum portfolios, diagnostic tests, criterion-referenced tests, and norm-referenced standardised tests. The principal purpose of all assessment should be to provide feedback to the teacher and the pupil in order that each knows what has been learned and what is not yet understood.

Children's progress in ABA centres was systematically assessed, monitored, and recorded. A range of assessment procedures that variously included direct observation, video observation and discrete trials was effectively employed. A quantitative approach to regularly recording and monitoring the children's progress was implemented. Less emphasis was placed on the systematic retention of samples of children's work, curriculum profiles, check-lists, questionnaires, and consultation with pupils.

In other educational placements children's progress was regularly assessed, monitored and recorded through a range of systematic assessment procedures, which variously included multidisciplinary assessment, teacher-observation, teacher-designed tasks, retention of samples of children's work, curriculum profiles, check-lists, questionnaires, consultation with pupils, standardised tests, reading logs, screening tests, and progress reports.

It is recommended that a continuum of assessment that employs a range of formal and informal assessment procedures be a feature of policy and practice in all educational provision for children with ASDs. A daily or near-daily monitoring and recording of the achievement of short-term objectives and of the development of individual skills will be necessary.

5.1.10   **Information and communication technology**

Information and communication technology (ICT) has a central role in education, and its availability and appropriate use in all educational provision is critical to ensuring that all children have a range of ICT skills to equip them for future educational, vocational and leisure activities. The use of ICT enhances the teaching of the curriculum through providing children with creative, interactive and self-directed activities. Its effective use can assist teachers in ensuring that children experience success as learners through obtaining access to differentiated curricular tasks. Information and communication technology can be used as a collaborative learning tool that provides opportunities for pupils to develop social and peer interaction skills, which are particularly important for pupils with ASDs. Software can be used for drill and practice in reinforcing important concepts, and simulation software facilitates pupils in the generalising of skills. The attention to visual content and the unambiguous language of instruction used in computer programs is of particular benefit in motivating children with ASDs and maintaining their attention span.

The role of ICT in meeting children's needs associated with the triad of impairments and in directly facilitating curriculum development was less developed in ABA centres. In almost all other educational placements ICT was used to facilitate the development of literacy and numeracy but was less used in other areas of the curriculum. The potential of ICT in meeting children's needs associated with the triad of impairments could be further developed in all educational placements.

It is recommended that ICT be used to facilitate all areas of the curriculum and in meeting children's needs associated with the triad of impairments in all educational provision. It is further recommended that attention be directed to ensuring that computer peripherals are comfortably within the children's reach, monitors are at the correct height, and seating is in the appropriate position.

5.1.11 Inclusion

Effectively managed inclusion can enhance the development of children with ASDs, and access to the curriculum should provide for planned and focused inclusion opportunities with non-ASD peers.

Almost all educational placements demonstrated a commitment to promoting the inclusion of children with ASDs with non-ASD peers. "Buddy systems" were effectively implemented in most placements, and reverse inclusion was employed in some. Inclusion policies in ABA settings require elaboration in relation to the collaborative planning required with mainstream class teachers for children's learning and teaching.

It is recommended that the promotion of social and functional inclusion be a feature of policy and practice in all educational provision for children with ASDs. Inclusion opportunities should be carefully and deliberately planned in order to benefit children with ASDs and their non-ASD peers.

5.1.12 Availability of support services

The nature of ASDs and the other disabilities that frequently occur with them necessitates that educational placements have access to a comprehensive multidisciplinary support service in order to meet the learning needs of children with ASDs.

There was a great variety in the level of support services available in all educational placements. However, geographical location was an important factor in the availability of support. Where an adequate multidisciplinary support service was available it was observed to contribute in a positive manner to the content of children's IEPs, the management of children's behaviour, and staff members' awareness of the implications of the triad of impairments for the children's learning and teaching. It is to be noted that all principals of the mainstream schools where children were enrolled in ordinary classes were satisfied with the availability of the support provided by the National Educational Psychological Service.
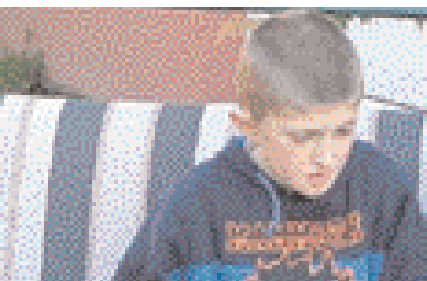
The need for an adequate, systematic and co-ordinated multidisciplinary support structure was evident in all educational placements. Such a support structure could assist in the continuous assessment of pupils, in setting measurable, achievable objectives, in supporting teachers and parents with advice and practical strategies for the management of children's programmes, and in the generalising and maintenance of skills. All educational provision would benefit from having an educational profile for each child through the compilation of a summary of available professionals' reports, summative assessment findings and parents' observations in individual children's files.

It is recommended that children with ASDs in all educational placements have access to an adequate, systematic and co-ordinated multidisciplinary support structure. Professionals from education and health services should come together to ensure that the parents and teachers of pupils with ASDs have high-quality and regular support in their provision of education and therapeutic programmes, whether in school or at home.

It is further recommended that the findings and recommendations of professionals' reports be considered in the planning and implementation of children's education programmes.

5.2   **Conclusion**

It is apparent from this evaluation of the provision made for pupils with ASDs that considerable progress has been made in establishing a range of services since autism was given recognition as a discrete disability category in 1998. Parents in general are pleased with the educational provision being made for their children, although they express concern about delays in diagnosis and early intervention. Significant support is now available in the area of teacher training, through an accredited autism-specific course, approach-specific courses, and on-line courses, and through the Special Education Support Service.

The report concludes that a coherent policy on educational provision for children with ASDs must be based on available research, consider each child's individual needs, include early intervention opportunities, and have a high level of parental involvement. It should also ensure access to an appropriate curriculum, provide for highly structured and systematic record-keeping and assessment, include a multidisciplinary support structure, incorporate opportunities for the professional development and training of staff members, and adopt an integrated departmental approach to provision in collaboration with the education community.

It is hoped that the positive practice and the areas for development identified in this report, and the recommendations made, will assist professionals in the further development of ASD provision and contribute towards even greater success in effectively meeting the needs of the children and their parents.

References

American Psychiatric Association (2000). Diagnostic and Statistical Manual of Mental Disorders (fourth edition, text revision). Washington: American Psychiatric Association.

Autism Working Group (2002a). Autistic Spectrum Disorders: Good Practice Guidance: 01, Guidance on Autistic Spectrum Disorders. Nottingham: Department for Education and Skills.

Autism Working Group (2002b). Autistic Spectrum Disorders: A Guide to Classroom Practice. Belfast: Department of Education, Northern Ireland.

Baker, S. (2001). "The picture exchange communication system," in National Autistic Society, Approaches to Autism, p. 53. London: National Autistic Society.

Baron-Cohen, Simon, and Bolton, Patrick (1993). Autism: The Facts. New York: Oxford University Press.

Beyer, Jannik, and Gammeltoft, Lone (2000). Autism and Play. London: Jessica Kingsley.

Birnbrauer, Jay S., and Leach, David J. (1993). "The Murdoch early intervention program after 2 years," Behaviour Change, 10, p. 63-74.

Bondy, Andy, and Frost, Lori (2002). A Picture's Worth: PECS and Other Visual Communication Strategies in Autism. Bethesda (Md): Woodbine House.

Charman, Tony, et al. (2005). "Outcome at 7 years of children diagnosed with autism at age 2: Predictive validity of assessments conducted at 2 and 3 years of age and pattern of symptom change over time," Journal of Child Psychology and Psychiatry, 46, p. 500-513.

Connor, Michael (1998). "A review of behavioural early intervention programmes for children with autism," Educational Psychology in Practice, 14 (2), p. 109-117.

Cooper, Paul (1996). "Are individual education plans a waste of paper?," British Journal of Special Education, 24 (3), p. 115-119.

Cumine, Val, Leach, Julia, and Stevenson, Gill (2000). Autism in the Early Years: A Practical Guide. London: David Fulton.

Dawson, Geraldine, and Osterling, Julie (1997). "Early intervention in autism," in Michael J. Guralnick (ed.), The Effectiveness of Early Intervention, p. 307-326. Baltimore (Md): Paul H. Brookes.

Degli Espinosa, Francesca (2001). "Behavioural modification (Lovaas)," in National Autistic Society, Approaches to Autism, p. 16. London: National Autistic Society.

Department of Education and Science (1995). Circular 11/95: "Time in school." Dublin: Department of Education and Science.

Department of Education and Science (1998). "Major initiative in special education services: Move marks breakthrough for integrated education and children with autism" (press statement, 5 November 1998). Dublin: Department of Education and Science.

Department of Education and Science (1999a). 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: Department of Education and Science.

Department of Education and Science (1999b). Developing a School Plan: Guidelines for Primary Schools. Dublin: Department of Education and Science.

Department of Education and Science (2001a). Educational Provision and Support for Persons with Autistic Spectrum Disorders: The Report of the Task Force on Autism. Dublin: Stationery Office.

Department of Education and Science (2001b). Professional Code of Practice on Evaluation and Reporting for the Inspectorate. Dublin: Department of Education and Science.

Department of Education and Science (2002a). Circular 07/02: "Applications for full-time or part-time special needs assistant support to address the special care needs of children with disabilities." Dublin: Department of Education and Science.

Department of Education and Science (2002b). Circular 08/02: "Applications for full-time or part-time resource teacher support to address the special education needs of children with disabilities." Dublin: Department of Education and Science.

Department of Education and Science (2003). Circular 24/03: "Allocation of resources for pupils with special educational needs in national schools." Dublin: Department of Education and Science.

Department of Education and Science (2004). Circular 09/04: "Allocation of resources for

pupils with special educational needs in national schools." Dublin: Department of Education and Science.

Department of Education and Science (2005a). Circular 01/05: "The National Council for Special Education." Dublin: Department of Education and Science.

Department of Education and Science (2005b). Special education circular SP ED 02/05. Dublin: Department of Education and Science.

Gerland, Gunilla (1996). A Real Person: Life on the Outside. London: Souvenir Press.

Grandin, Temple (1996). Thinking in Pictures and Other Reports from My Life with Autism. New York: Vintage Books.

Greenspan, Stanley I., and Wieder, Serena (1997). "An integrated developmental approach to interventions for young children with severe difficulties in relating and communicating," Zero to Three, 17, p. 5-17.

Gresham, Frank M., and MacMillan, Donald L. (1997). "Autistic recovery: An analysis and critique of the empirical evidence on the early intervention project," Behavioural Disorders, 22 (4), p. 185-201.

Guralnick, Michael J. (1997). "Second-generation research in the field of early intervention," in Michael J. Guralnick (ed.), The Effectiveness of Early Intervention, p. 3-20. Baltimore (Md): Paul H. Brookes.

Haramaki, Tomoko, et al. (2001). Treatment and Education of Autistic and Related Communication Handicapped Children (TEACCH), Unit 5: Curriculum and Approaches for Children with Autism. Birmingham: School of Education, University of Birmingham.

Harris, Sandra L., and Handleman, Jan S. (1994). "Pre-School Programs for Children with Autism," in Sandra L. Harris and Jan S. Handleman (eds.), p. 1-13. Austin: Pro-Ed.

Heflin, L. Juane, and Simpson, Richard L. (1998). "Interventions for children and youth with autism," Focus on Autism and Other Developmental Disabilities, 13 (4), p. 194-211.

Hodgon, Linda (1999). Solving Behavior Problems in Autism: Improving Communication with Visual Strategies. Troy (Mich.): Quinn-Roberts.

Howlin, Patricia (2001). "Behavioural techniques," in National Autistic Society, Approaches to Autism, p. 17. London: National Autistic Society.

Ireland (1993). Report of the Special Education Review Committee. Dublin: Stationery Office.

Ireland (1998). Education Act (1998). Dublin: Stationery Office.

Jones, Glenys (2002). "Meeting the needs of able children with an ASD in mainstream school: Distance education course for professionals working with children with autism" (lecture at St Patrick's College, Dublin, 19 January 2002). Birmingham: School of Education, University of Birmingham.

Jordan, Rita (1985). "Signing and autistic children," Communication, 19 (3), p. 19-21.

Jordan, Rita (1996). "Teaching communication to individuals within the autistic spectrum," Reach, 9, p. 95-102.

Jordan, Rita (1999). Autistic Spectrum Disorders: An Introductory Handbook for Practitioners. London: David Fulton.

Jordan, Rita (2001). Autism with Severe Learning Difficulties. London: Souvenir Press.

Jordan, Rita (2005). "Autistic spectrum disorders," in Ann Lewis and Brahm Norwich (eds.), Special Teaching for Special Children: Pedagogies for Inclusion, p. 110-121. Maidenhead: Open University Press.

Jordan, Rita, and Jones, Glenys (1999). "Review of research into educational interventions for children with autism in the UK," Autism, 3 (1), p. 101-110.

Jordan, Rita, Jones, Glenys, and Murray, Dinah (1998). Educational Interventions for Children with Autism: A Review of Recent and Current Research. Sudbury (Suffolk): Department for Education and Employment.

Jordan, Rita, Maddock, Pam, and Jones, Glenys (2001). Providing and Evaluating a Broad and Relevant Curriculum, Unit 6: Curriculum and Approaches for Children with Autism. Birmingham: School of Education, University of Birmingham.

Jordan, Rita, and Powell, Stuart (1995). Understanding and Teaching Children with Autism. London: Wiley.

Kaufman, Barry Neil (1976). To Love Is to Be Happy With. London: Souvenir Press.

Kaufman, Barry Neil (1994). Son Rise: The Miracle Continues. Tiburon (Calif.): H. J. Kramer.

Kellett, Mary, and Nind, Melanie (2003). Implementing Intensive Interaction in Schools. London: David Fulton.

Lawson, Wendy (2002). "Keys to understanding and working with the spectrum of autism" (conference paper, Dublin, 15 February 2002).

Lord, Catherine (1995). "Follow-up of two-year-olds referred for possible autism," Journal of Child Psychology and Psychiatry, 36 (8), p. 1365-1382.

Lovaas, O. Ivar (1981). Teaching Developmentally Disabled Children: The ME Book. Austin: Pro-Ed.

Lovaas, O. Ivar (1987). "Behavioral treatment and normal educational and intellectual functioning in young autistic children," Journal of Consulting and Clinical Psychology, 55 (1), p. 3-9.

Lovaas, O. Ivar, and Smith, Tristram (1989). "A comprehensive behavioral theory of autistic children: Paradigm for research and treatment," Journal of Behavior Therapy and Experimental Psychiatry, 20, p. 17-29.

McEachin, John J., Smith, Tristram, and Lovaas, O. Ivar (1993). "Long-term outcome for children with autism who received early intensive behavioral treatment," American Journal on Mental Retardation, 97, p. 369-372.

McGee, John J. (1987). Gentle Teaching: A Nonaversive Approach for Helping Persons with Mental Retardation. New York, Human Sciences Press.

Mesibov, Gary B. (1993). "Treatment outcome is encouraging," American Journal on Mental Retardation, 97 (4), p. 379-380.

Mesibov, Gary, and Howley, Marie (2003). Accessing the Curriculum for Pupils with Autistic Spectrum Disorders. London: David Fulton.

National Autistic Society (2002). Autism Accreditation Ensuring Quality Provision for People with an Autistic Spectrum Disorder. London: National Autistic Society.

National Council for Curriculum and Assessment (1999). Primary School Curriculum: An Introduction. Dublin: Stationery Office.

National Council for Curriculum and Assessment (2002). Draft Curriculum Guidelines for Teachers of Students with General Learning Disabilities. Dublin: Stationery Office.

National Council for Curriculum and Assessment (2004). Towards a Framework for Early Learning: A Consultative Document. Dublin: Stationery Office.

National Council for Curriculum and Assessment (2005). "Towards a framework for early learning: Final consultation report" (at HYPERLINK "" www.ncca.ie).

National Initiative for Autism Screening and Assessment (2003). National Autism Plan for Children (NAPC): Plan for the Identification, Assessment, Diagnosis and Access to Early Interventions for Pre-School and Primary School Aged Children with Autistic Spectrum Disorders. London: National Autistic Society.

National Research Council, Division of Behavioral and Social Sciences and Education, Committee on Educational Interventions for Children with Autism (Catherine Lord and James P. McGee, editors) (2001). Educating Children with Autism. Washington: National Academy Press.

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.

Nind, Melanie (1999). "Intensive interaction and autism: A useful approach," British Journal of Special Education, 26 (2), p. 96-102.

Nind, Melanie (2001). "Intensive interaction (interactive curriculum)," in National Autistic Society, Approaches to Autism, p. 38. London: National Autistic Society.

Odom, Samuel L., and Strain, Phillip S. (1984). "Peer-mediated approaches to promoting children's social interaction: A review," American Journal of Orthopsychiatry, 54, p. 544-557.

Ozonoff, Sally, and Cathcart, Kristina (1998). "Effectiveness of a home program intervention for young children with autism," Journal of Autism and Developmental Disorders, 28 (1), p. 25-32.

Peeters, Theo (1997). Autism: From Theoretical Understanding to Educational Intervention.

London: Whurr.

Potter, Carol, and Whittaker, Chris (2001). Enabling Communication in Children with Autism. London: Jessica Kingsley.

Prizant, Barry M. (1996). "Communication, language, social and emotional development," Journal of Autism and Developmental Disorders, 26 (2), p. 173-177.

Rogers, Sally J. (1996). "Early intervention in autism," Journal of Autism and Developmental Disorders, 26, p. 243-246.

Schindele, R. A. (1985). "Research methodology in special education: A framework approach to special problems and solutions," in Seamus Hegarty and Peter Evans (eds.), Research and Evaluation Methods in Special Education: Quantitative and Qualitative Techniques in Case Study Work, p. 3-24. London: NFER-Nelson.

Schopler, Eric (2001). "TEACCH (Treatment and Education of Autistic and related Communication Handicapped Children)," in National Autistic Society, Approaches to Autism, p. 69. London: National Autistic Society.

Schopler, Eric, Mesibov, Gary B., and Hearsey, Kathy (1995). "Structured teaching in the TEACCH system," in Eric Schopler and Gary B. Mesibov (eds.), Learning and Cognition in Autism, p. 243-267. New York, Plenum.

Schopler, Eric, et al. (1971). "The effects of treatment structure on the development of autistic children," Archives of General Psychiatry, 24, p. 262-267.

Seal, Brenda C., and Bonvillian, John D. (1997). "Sign language and motor functioning in students with autistic disorder," Journal of Autism and Developmental Disorders, 27 (4), p. 437-466.

Shea, Victoria (2004). "A perspective on the research literature related to early intensive behavioural intervention (Lovaas) for young children with autism," Autism, 8 (6), p. 349-367.

Sheehy, Noel (2001). Evaluation of TEACCH Methods. Belfast: Barnardo's.

Sherratt, Dave, and Peter, Melanie (2002). Developing Play and Drama in Children with Autistic Spectrum Disorders. London: David Fulton.

Smith, Tristram, et al. (1997). "Intensive behavioral treatment for preschoolers with severe mental retardation and pervasive developmental disorder," American Journal of Mental Retardation, 102, p. 238-249.

Stone, Wendy L., et al. (1999). "Patterns of adaptive behavior in very young children with autism," American Journal on Mental Retardation, 104, p. 187-199.

Strain, Phillip S., and Cordisco, Linda K. (1994). "LEAP preschool," in Sandra L. Harris and Jan S. Handleman (eds.), Preschool Education Programs for Children with Autism, p. 225-244. Austin: Pro-Ed.

Whitaker, Philip, et al. (1998). "Children with autism and peer group support using ëcircles of friends'," British Journal of Special Education, 25 (2), p. 60-64.

Wing, Lorna (1996). The Autistic Spectrum: A Guide for Parents and Professionals. London: Constable.

Wing, Lorna, and Gould, Judith (1979). "Severe impairments of social interaction and associated abnormalities in children: Epidemiology and classification," Journal of Autism and Childhood Schizophrenia, 9, p. 11-29.

World Health Organisation (1994). The International Statistical Classification of Diseases and Related Health Problems (tenth revision). Geneva: WHO.

From Department of Education and Science, Educational Provision and Support for Persons with Autistic Spectrum Disorders: The Report of the Task Force on Autism, Dublin: Stationery Office, and World Health Organisation, The International Statistical Classification of Diseases and Related Health Problems (tenth revision), Geneva: WHO, 1993.

In the International Classification of Diseases (tenth revision) 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 three years in at least one of the following areas:

1   receptive or expressive language as 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 items (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, bringing 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).

C 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 (F20ó) 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 three 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

A There is no clinically significant general delay in spoken or receptive language or cognitive development. Diagnosis requires that single words have developed by two 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 three years should be at a level consistent with normal intellectual development. However, motor milestones may be somewhat delayed and motor clumsiness is usual (though not a necessary diagnostic feature). Isolated special skills, often related to abnormal preoccupations, are common, but are not required for diagnosis.

B There are qualitative abnormalities in reciprocal social interaction (criteria for autism).

C The individual exhibits an 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).

The disorder is not attributable to the other varieties of pervasive developmental disorder: simple schizophrenia (F20.6); schizophrenia disorder (F21); obsessive compulsive disorder (F42ó); 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 that fit the general description for pervasive developmental disorders but in which contradictory findings or a lack of adequate information mean that the criteria for any of the other F84 codes cannot be met.

From American Psychiatric Association, Diagnostic and Statistical Manual of Mental Disorders (fourth edition, text revision), Washington: American Psychiatric Association, 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 non-verbal 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 three 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 non-verbal 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 the age of two years, communicative phrases used by the age of three 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), or 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 non-verbal 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 sub-threshold symptomatology, or all of these.

PHASE 1: CENTRES IN WHICH APPLIED BEHAVIOUR ANALYSIS (ABA) APPROACHES ARE EXCLUSIVELY OR LARGELY IMPLEMENTED

Ábalta, Knocknacarra, Galway

CABAS®, Boreenmanna Road, Cork

CABAS®, Kilbarrack, Dublin 5

The Saplings, Kilwarden, Kill, Co. Kildare

PHASE 2:   DEDICATED SPECIAL SCHOOLS FOR CHILDREN WITH AUTISTIC SPECTRUM DISORDERS

Ballyowen Meadows, Stillorgan, Co. Dublin

Holy Spirit School, Gaol Road, Kilkenny

PHASE 3: SPECIAL SCHOOLS FOR CHILDREN WITH GENERAL LEARNING DISABILITIES

Holy Family School, Cootehill, Co. Cavan

St Gabriel's School, Curraheen Road, Cork

Scoil Chormaic, Cashel, Co. Tipperary

PHASE 4: SPECIAL CLASSES FOR CHILDREN WITH AUTISTIC SPECTRUM DISORDERS

Scoil Eoin, Balloonagh, Tralee, Co. Kerry

St Flannan's National School, Inagh, Ennis, Co. Clare

Scoil Naomh Mhuire an Oileáin, Cork

Scoil an Linbh Íosa, Prosperous, Co. Kildare

Scoil Aodha Rua agus Nuala, Donegal

Lucan Educate Together National School, Willsbrook, Lucan, Co. Dublin

Scoil Mhuire, Coolcotts, Wexford

PHASE 5: CHILDREN WITH AUTISTIC SPECTRUM DISORDERS INCLUDED IN MAINSTREAM PRIMARY SCHOOLS

Filemore National School, Cahersiveen, Co. Kerry

Newcastle Lyons National School, Newcastle Lyons, Co. Dublin

Newtown National School, Newtown, Co. Cork

Scoil Náisiúnta Nioclás Naofa, Dunmore, Co. Galway

Scoil Náisiúnta Phádraig Naofa, Tullow, Co. Carlow

St Brigid's National School, Cannistown, Navan, Co. Meath

St Joseph's National School, Riverstown, Co. Cork

St Patrick's Boys' National School (De La Salle), Wicklow

**Evaluation of Educational Provision
for Children with Autistic Spectrum Disorders**

A Report by the Inspectorate of the Department of Education and Science **2006**

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AGUS EOLAÍOCHTA

DEPARTMENT OF
EDUCATION
AND SCIENCE