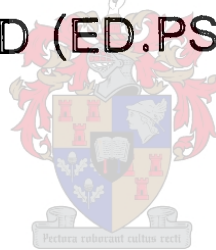


A CASE STUDY OF A SUPPORT UNIT FOR CHILDREN WITH ASPERGER SYNDROME IN WALES

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Thesis in partial fulfilment of the requirements
for the degree of
Masters of Education
at the
Stellenbosch University

SUPERVISOR: PROF R NEWMARK

April 2006

DECLARATION

I, the undersigned, hereby declare that the work contained in this thesis my own original work and that I have not previously, in its entirety or in part submitted it at any university for a degree.

Signature:

Date: 03 / 03 / 2006

SUMMARY

This study emanates from my work as the specialist teacher for learners with Asperger Syndrome at a mainstream secondary school in Wales. The study will aim to explore the role of a specialist centre at the secondary school in Wales and its function in enhancing the quality of education and in the inclusion of learners with Asperger Syndrome into secondary mainstream education. When learners with Asperger Syndrome are placed in mainstream education, there should be some means whereby the mainstream education system can provide specialised provision for their needs by developing an effective learning environment for them. The aim of this study is to define what mainstream schools can do to facilitate the effective inclusion of learners with Asperger Syndrome and how these learners can benefit from specialist provision in a mainstream environment. The research question under investigation will therefore be: in what way can a specialist centre contribute towards the inclusion of learners with Asperger Syndrome into mainstream education?

Various learners from the centre were observed and interviewed to determine the effect of the inclusion on their education. Educators, parents and professionals were interviewed informally to determine the effect they have on the inclusion process and the centre's function in the school. I reflect on a journey of coming closer to understanding the experiences that learners, parents, educators and professionals might have as they support learners with Asperger Syndrome in a mainstream secondary school. I believe that the findings of this qualitative study add credibility to the limited research on the way that a specialist centre can contribute towards successful inclusion of learners with Asperger Syndrome into a mainstream secondary school.

OPSOMMING

Hierdie studie ontspring van my werk as 'n spesialisonderwyser vir leerders met Asperger Sindroom in 'n hoofstroom hoërskool in Wallis. Die doel van die studie is om 'n ondersoek in te stel oor hoe kinders met Asperger Sindroom met die ondersteuning van 'n spesialissentrum in 'n hoofstroom hoërskool ingesluit kan word. Wanneer kinders met Asperger Sindroom in 'n hoofstroomskool geplaas word, moet daar 'n vorm van ondersteuning vir hulle wees, wat inklusie moontlik sal maak. Die doel is dus om te definieer wat die hoofstroomskool kan doen om effektiewe inklusie te kan fasiliteer vir leerders met Asperger Sindroom en hoe 'n spesialissentrum in die skool die leerders kan bevoordeel. Die navorsingsvraag wat ondersoek word is dus: Hoe kan 'n spesialissentrum daartoe bydra dat kinders met Asperger Sindroom ingesluit word in 'n hoofstroom hoërskool?

Daar word onderhoude met verskeie leerders van die sentrum gevoer om te bepaal hoe die spesialissentrum 'n invloed op hul onderrig in die hoofstroomskool het. Ouers, onderwysers en professionele persone wat deel vorm van die sentrum is informeel ondervra om te bepaal wat die effek van die sentrum op die inklusieproses van die leerders in die hoofstroomskool is. Hierdie studie was 'n ervaring waar ek meer kon leer oor die ondervinding van die leerders, ouers, onderwysers en professionele persone wat deel vorm van die inklusieproses in 'n hoofstroomskool. Ek glo dat die bevindinge van hierdie kwalitatiewe studie geweldige waarde verleen aan 'n beperkte studieveld oor inklusie vir leerders met Asperger Sindroom in die hoofstroomskoolomgewing.

ACKNOWLEDGEMENTS

- A personal thanks goes to my friends and family who supported me while doing this research.
- I would like to thank my dearest husband for all his support and love.
- A special thank you to Prof. Newmark who kept excellent communication going and who supported me in the writing of my thesis.

TABLE OF CONTENTS

CHAPTER 1:

CONTEXTUALIZATION AND ORIENTATION OF THE STUDY	1
1.1 INTRODUCTION.....	1
1.2 RESEARCH QUESTION.....	2
1.3 RESEARCH AIMS.....	4
1.4 RESEARCH DESIGN.....	4
1.4.1 Introduction	4
1.4.2 Research Approach.....	5
1.4.3 Research method	6
1.4.4 Data production	7
1.4.4.1 <i>Literature Review</i>	7
1.4.4.2 <i>Semi-Structured Interviews</i>	7
1.4.4.3 <i>Observation</i>	9
1.4.4.4 <i>Review of personal records</i>	9
1.4.5 Data analysis.....	10
1.5 DESCRIPTION OF CONCEPTS	10
1.5.1 Educator.....	10
1.5.2 Experience	10
1.5.3 Children/learners/students	10
1.5.4 Learners with special educational needs.....	11
1.5.5 Support assistants/learner assistants.....	11
1.5.6 Inclusion	12
1.5.6.1 <i>Mainstreaming</i>	12
1.5.6.2 <i>Inclusion</i>	12
1.5.6.3 <i>Full inclusion</i>	13
1.6 LEARNERS WHO HAVE ASPERGER SYNDROME	14
1.7 STRUCTURE OF PRESENTATION	15
1.8 SUMMARY	16

CHAPTER 2

EDUCATION OF LEARNERS WHO HAVE ASPERGER SYNDROME AND AN INCLUSIVE EDUCATION SYSTEM	17
2.1 INTRODUCTION.....	17
2.2 LEARNERS WITH ASPERGER SYNDROME	17
2.2.1 Profile of a learner with Asperger Syndrome.....	17
2.2.2 Other diagnostic profiles of Asperger Syndrome.....	20
2.2.3 Intrinsic factors	21
2.2.3.1 <i>Learning difficulties that might co-exist with Asperger Syndrome</i>	21
2.2.3.2 <i>Additional diagnoses</i>	21
2.2.3.3 <i>Gender and ethnicity</i>	22
2.2.3.4 <i>Cause</i>	22
2.2.3.5 <i>Psychological theories</i>	23
2.2.3.6 <i>Parameters of Asperger Syndrome</i>	24
2.2.4 Prevalence studies.....	27
2.2.4.1 <i>Problems in establishing prevalence</i>	27
2.2.4.2 <i>Increase in the numbers of learners diagnosed with Asperger Syndrome</i>	28
2.2.5 Extrinsic factors.....	29
2.2.5.1 <i>Communication difficulties</i>	29
2.2.5.2 <i>Socialising difficulties</i>	31
2.2.5.3 <i>Friendships</i>	34
2.2.6 Outcome.....	36
2.2.7 Optimism	37
2.3 EDUCATIONAL PROVISION FOR LEARNERS WITH ASPERGER SYNDROME	38
2.3.1 Choosing a school for a learner with Asperger Syndrome	39
2.3.2 Features which are likely to create an effective placement	42
2.3.3 Questions about a learner's current educational placement.....	43
2.3.4 Research evidence on different types of educational placements.....	44
2.3.5 Schools, specialist centres and classes which are specific to learners with Asperger Syndrome	47
2.3.6 Meeting the needs of learners with Asperger Syndrome within mainstream schools	48
2.4 THE MOVEMENT TOWARDS INCLUSIVE EDUCATION	49
2.4.1 What is understood by inclusive education?	49

2.4.2	Provision by mainstream schools for inclusive education.....	50
2.5	EDUCATIONAL INTERVENTIONS.....	57
2.6	PERSPECTIVES ON THE EDUCATION OF LEARNERS WITH ASPERGER SYNDROME	65
2.6.1	An international perspective on patterns of placement of learners with Asperger Syndrome.....	65
2.6.2	United States of America.....	65
2.6.3	Australia	69
2.6.4	A South African perspective	70
2.7	REFLECTION	77

CHAPTER 3

	RESEARCH DESIGN AND METHODOLOGY	80
3.1	INTRODUCTION.....	80
3.2	RESEARCH QUESTION.....	80
3.3	RESEARCH AIMS.....	81
3.4	RESEARCH DESIGN.....	81
3.4.1	Introduction	81
3.4.2	Research approach.....	84
3.4.3	Research method.....	84
3.4.3.1	<i>Sampling</i>	86
3.4.4	Context.....	87
3.4.5	Data production	89
3.4.5.1	<i>Literature Review</i>	89
3.4.5.2	<i>Interviews</i>	90
3.4.5.3	<i>Participant-observations</i>	94
3.4.5.4	<i>Review of personal records</i>	95
3.5	THE RESEARCH PROCESS.....	95
3.5.1	Data analysis.....	96
3.6	DATA VERIFICATION.....	101
3.6.1	Validity and reliability.....	101
3.6.2	Credibility (parallels internal validity).....	102
3.6.3	Transferability.....	103
3.6.4	Dependability	103
3.7	ETHICAL CONSIDERATIONS.....	104
3.8	SUMMARY	104

CHAPTER 4

IMPLEMENTATION OF THE STUDY	106
4.1 INTRODUCTION.....	106
4.2 RESEARCH PROCESS.....	106
4.3 PROCESS OF DATA PRODUCTION AND ANALYSIS	107
4.4 PRESENTATION OF INTERVIEWS	108
4.5 THE ISSUE OF SUPPORT	109
4.5.1 Support assistants.....	110
4.5.2 Specialist teacher.....	110
4.5.3 Specialist centre	111
4.6 SCHOOL-RELATED FINDINGS	111
4.6.1 Educators	114
4.6.1.1 <i>Stage 1: Initial encounter</i>	114
4.6.1.2 <i>Stage 2: Identification of themes</i>	114
4.6.1.3 <i>Stage 3: Clustering of themes</i>	118
4.6.1.4 <i>Stage 4: Summary of topics</i>	118
4.7 PARENT-/FAMILY-RELATED FINDINGS.....	120
4.7.1 Parents.....	120
4.7.1.1 <i>Stage 1: Initial encounter</i>	121
4.7.1.2 <i>Stage 2: Identification of themes</i>	122
4.7.1.3 <i>Stage 3: Clustering of themes</i>	123
4.7.1.4 <i>Stage 4: Summary of topics</i>	123
4.8 CHILD-/LEARNER-RELATED FINDINGS.....	124
4.8.1 Learners	124
4.8.1.1 <i>Stage 1: Initial encounter</i>	128
4.8.1.2 <i>Stage 2: Identification of themes</i>	128
4.8.1.3 <i>Stage 3: Clustering of Themes</i>	130
4.8.1.4 <i>Stage 4: Summary of topics</i>	130
4.9 FACTORS RELATING TO THE EDUCATION DEPARTMENT	131
4.10 PROFESSIONALS-RELATED FINDINGS	131
4.10.1 Stage 1: Initial encounter.....	131
4.10.2 Stage 2: Identification of themes	132
4.10.3 Stage 3: Clustering of themes	134
4.10.4 Stage 4: Summary of topics	134
4.11 PERSONAL RECORDS.....	135

4.11.1	Stage 1: Initial encounter.....	135
4.11.2	Stage 2: Identification of themes	136
4.11.3	Stage 3: Clustering of themes	136
4.11.4	Stage 4: Summary of topics	137
4.12	OBSERVATION AND FIELD NOTES	138
4.12.1	Stage 1: Initial encounter.....	138
4.12.2	Stage 2: Identification of themes	138
4.12.3	Stage 3: Clustering of themes	139
4.12.4	Stage 4: Summary of topics	139
4.13	INTEGRATION OF INTERVIEWS, RECORDS AND OBSERVATIONS.....	140
4.14	SUMMARY.....	144

CHAPTER 5

IMPLICATIONS, RECOMMENDATIONS AND CONCLUSION 145

5.1	INTRODUCTION.....	145
5.2	DISCUSSION OF FINDINGS.....	146
5.2.1	Implications of the education of learners who have Asperger Syndrome in the mainstream.....	146
5.2.2	Indicators for successful inclusion of learners who have Asperger Syndrome in a mainstream school.....	147
5.2.2.1	<i>Intrinsic factors</i>	147
5.2.2.2	<i>Extrinsic factors</i>	148
5.3	IMPLICATIONS FOR THE PARENTS/FAMILY	149
5.4	IMPLICATIONS FOR THE LOCAL EDUCATION AUTHORITY	150
5.5	IMPLICATIONS FOR THE SUPPORT STAFF.....	151
5.6	RECOMMENDATIONS.....	152
5.7	THE IMPLICATIONS OF THIS STUDY FOR SOUTH AFRICA	152
5.8	LIMITATIONS OF THIS STUDY	154
5.9	REFLECTION	155

REFERENCES..... 158

ADDENDUM A..... 171

ADDENDUM B..... 172

ADDENDUM C..... 173

ADDENDUM D.....	174
ADDENDUM E.....	175
ADDENDUM E1.....	176
ADDENDUM F1.....	177
ADDENDUM F2.....	178
ADDENDUM F3.....	179
ADDENDUM G.....	180
ADDENDUM G1.....	181
ADDENDUM H.....	182
ADDENDUM I.....	183
ADDENDUM J.....	184

CHAPTER 1

CONTEXTUALIZATION AND ORIENTATION OF THE STUDY

1.1 INTRODUCTION

This study was conducted within the context of the current educational accommodation for learners with Asperger Syndrome in Wales, where the education system aims to include learners with Asperger Syndrome within mainstream schools.

The term Autism Spectrum Disorder is used in this study rather than Autistic Disorder, which is suggested by DSMV-IV-TR (2000:70). At the International Conference for Autism (2004) held in the United Kingdom, Gillberg recommended that we use the first term, which is more scientifically precise. In any case, DSM-IV-TR (2000) is at present being revised and the term will officially change from Autistic Disorder to Autism Spectrum Disorders.

While teaching in South Africa for three years, I had the good fortune to work with learners who have Autism Spectrum Disorders. I decided to expand my experience and knowledge by moving to the United Kingdom where useful advances have been made in including learners with Autism Spectrum Disorders into mainstream facilities. I am currently working as a specialist teacher for the Local Education Department of Wales at a specialist centre which offers support for learners with Asperger Syndrome who have been included in the mainstream school. The centre also provides support to the staff in the mainstream school and co-ordinates effective inclusion by providing appropriate interventions for the children with Asperger Syndrome. Apart from being the day-to-day manager of this centre, I co-ordinate the teaching of and support for learners with Asperger Syndrome in the mainstream school. This is pioneering work in the area as the centre is one of the first to be opened in Mid-Wales. A trial period of two years has demonstrated the success of this centre, and the establishment of similar centres is now being encouraged in all schools around Wales.

This study emanates from my work as the manager and co-ordinator of the centre, and as a specialist teacher of learners with Asperger Syndrome at a mainstream secondary school in Wales. As a member of a team that does specialised work in Wales, I have to make recommendations regarding support and placement of learners, take important decisions about the day-to-day functioning of this specialist centre, and develop effective teaching methods as well as strategies for learners with Asperger Syndrome. This study will aim to explore the role of a specialist centre, such as the one established at this secondary school in Wales, and its function in enhancing the quality of education and facilitating the inclusion of learners with Asperger Syndrome into mainstream education.

In the final chapter of this study, the findings will be related to inclusive education for learners with Asperger Syndrome in South Africa.

1.2 RESEARCH QUESTION

According to Attwood (2000:12), Asperger Syndrome has recently been included in the DSM IV-TR (2000:70) under the term Autistic Disorders (as already mentioned, in this thesis I will refer to Autism Spectrum Disorders). During the last few years education authorities and professionals working with learners with special needs realised that more and more learners with Asperger Syndrome are being diagnosed so educational placement for these learners has become an issue. The Autism Spectrum is a very broad continuum that includes learners with classic Autism and learners with high-functioning Autism/Asperger Syndrome. This can cause confusion when identifying suitable placement for high-functioning candidates, who might function on a level too high for them to be included in a special school. Learners at the lower end of the spectrum may find mainstream education very challenging and special needs schools might be a more appropriate means of education. Learners at the higher end of the spectrum might be able to cope well with mainstream education, provided that they have the necessary support for their needs. Educators and psychologist in Wales often face the difficult problem of having to distinguish between a learner who has Asperger Syndrome (high-functioning Autism) and classic Autism (low-functioning Autism) (Attwood, 2000:13-15).

Another problem being faced by the government, schools, educators and psychologists in Wales is the growing number of learners diagnosed with Asperger Syndrome during the past five years. According to a National Autistic Society Bulletin

(February 2003), the diagnosis of learners has doubled during the last five years since the syndrome has become better known. According to the National Autistic Society (2003), a majority of learners diagnosed with Asperger Syndrome in Wales have been in mainstream education since they started school. Only a small number of learners with Asperger Syndrome have been placed in special schools since the syndrome became known twenty years ago. Most learners with Asperger Syndrome placed in mainstream primary schools were moved to special needs secondary schools, because the mainstream secondary schools could not meet their educational needs. This was because the education at these school schools was aimed at learners at the lower end of the Autism Spectrum. Many other problems were associated with these special school placements as well. Prompted by recent developments in inclusion, the authorities decided to rethink placements for learners with Asperger Syndrome.

According to Attwood (2000:15-17) Asperger Syndrome is associated with a person with good cognitive capabilities, but low ability in social communication skills. Most people with Asperger Syndrome can maintain a normal lifestyle, hold a job and be part of mainstream society. The danger of placing learners with Asperger Syndrome in special schools was that it could limit their personal development and quality of life (Attwood, 2000:17).

When learners with Asperger Syndrome are placed in mainstream education, however, the mainstream education system should have some means of making specialised provision for their needs and thus developing an effective learning environment for them. The challenges to these mainstream schools was to identify what they could do to facilitate the inclusion of learners with Asperger Syndrome and how they could enable these learners to benefit from specialist provision in a mainstream environment. As someone intimately involved in meeting these challenges, an appropriate research question was:

In what way can a specialist centre contribute to the inclusion of learners with Asperger Syndrome?

While working with children with Asperger Syndrome for the past five years at the centre, I collected data that were used for this study. The data inspired me to undertake this study. In this study I will investigate the inclusion of learners with

Asperger Syndrome into a secondary mainstream school, with support from a specialist centre, facilitating for their individual needs.

1.3 RESEARCH AIMS

This study will seek to explore how learners with Asperger Syndrome can be included in a mainstream secondary school with the support of a specialised centre in the mainstream school. This exploratory investigation will be conducted in a mainstream school in Wales, where a specialist centre provides support to the learners in their mainstream school environment to make inclusion possible. A case study will be conducted in the mainstream school and I will investigate the indicators of successful inclusion. I will explore the facilitation of inclusion and the specialised provision that this secondary mainstream school has made to include learners on the Autism Spectrum. Various learners in the school that access this centre will be observed and interviewed to determine the effect of the centre on their inclusion in mainstream education. Educators, parents and professionals will be interviewed informally to determine the effect they have on the inclusion process for learners with Asperger Syndrome and the centre's function in the school.

1.4 RESEARCH DESIGN

1.4.1 Introduction

According to Mouton (2001:55), a research design is a blueprint of how you intend to conduct the research. Durrheim (1999:29) defines a research design as a strategic framework for action that serves as a bridge between the research question and the execution of the research. He emphasises that this framework should be coherent in order to provide valid answers to the research question (Durrheim, 1999:33).

Le Grange (2002:192-5) argues that qualitative research produces qualitative data rather than just being qualitative research in itself. Since the aim of this study is to investigate and understand in what way a specialist centre can contribute to the inclusion of learners with Asperger Syndrome into a mainstream secondary school, a literature review as well as a qualitative research method seemed most appropriate. According to Merriam (1998:6), such qualitative investigation implies a direct concern with the experience of all the participants as it is 'lived' or 'felt' or 'undergone' by them.

An interpretive research approach is described by Merriam (1998:4) as "lived experiences". In the context of this study the lived experiences of those of the learner's, educator's, parent's and professional support providers. For Merriam (1998:5), in an inductive mode of enquiry, knowledge is constituted through gaining an understanding of the meaning of the process or experience.

By making use of an interpretive approach and a qualitative research design, I investigated the subjective experiences of the educators, learners, parents and professionals, and came to understand these experiences by interacting with them in interviews and observations.

1.4.3 Research method

Gough (2000:4) contends that methodology provides the rationale for the procedure the researcher follows. Mouton (2001:55) confirms that research methodology is the systematic, methodical and accurate execution of the research design, where various methods and tools are used to perform different tasks. I will briefly explain what methods I used in conducting this study.

A case study method was used for this study. The case studied was the specialist centre established to help with the inclusion of learners with Asperger Syndrome as part of the mainstream education system. The study investigated this specialist centre and the learners who had access to the resources provided by centre which is part of a secondary mainstream school in Wales.

Yin (in Merriam, 1998:27) describes a case study as "an empirical enquiry that investigates a contemporary phenomenon within its real-life context". Miles and Huberman (cited in Merriam, 1998:27) refer to a case as a phenomenon in a bounded context. The case is also seen as an integrated system (Stake in Merriam, 1998:28). The phenomenon in this instance is the support provided to learners with Asperger Syndrome by a specialist centre which is part of a mainstream secondary school. I will briefly reflect on my own experiences of educating learners with Asperger Syndrome at the mainstream secondary school during the process of the study.

According to Stake (1998:254), a case study that portrays an educational problem in all its personal and social complexity is of great value. This study focuses on the solution that education authorities of Wales found to the challenge of meeting the

needs of Asperger Syndrome. Their solution was to include these learners in a mainstream school, but to provide the necessary support.

1.4.4 Data production

In this thesis the term data production is used rather than data collection. This has been done in view of the interpretive approach that underlies this study. Gough (1999:264 cited in Le Grange, 2001:80) suggests that this reflects the notion that one ultimate reality does not actually exist, but instead it is constructed according to one's own unique perceptions and experiences. Thus the researcher produces the data. As researcher, my own subjective reality is framed by the individual life experience that I have at the secondary mainstream school as a specialist teacher; this then shapes the way I produce the data. Data will be produced by means of:

- Unstructured interviews;
- A review of personal records; and
- Observations.

1.4.4.1 Literature Review

The term literature review has been defined by various authors. Merriam (1998:49), for instance, defines literature in this context as theoretical or conceptual writing. Approaching the literature review from another angle, Mertens (1998:34) argues that the purpose of the literature review is to provide the researcher with an overall framework in which pieces of work fit into the 'big picture' or what is known about a topic from previous research.

In this study, the literature review will also help to inform the choice of criteria used for the sample selection as well as the formulation of the problem. The literature review will form the frame of reference throughout the study whilst data are produced, processed and interpreted.

1.4.4.2 Semi-Structured Interviews

Semi-structured interviews are conducted within a fairly open framework, which allows for focused, conversational, two-way communication. Ted Zorn (2001:1) explains that the semi-structured interviews can be used both to give and receive information.

Ted Zorn (2001:1) contrasts the closed questions of the questionnaire with those asked during a semi-structured interview. In the former detailed questions are formulated ahead of time. Semi-structured interviewing, on the other hand, starts with more general questions or topics. Relevant topics are initially identified and the possible relationship between these topics and the issues such as availability, expense and effectiveness become the basis for more specific questions, which do not need to be prepared in advance (Ted Zorn, 2001:1).

Not all questions are designed and phrased ahead of time. The majority of questions are generated during the interview, allowing both the interviewer and the person being interviewed the flexibility to probe for details or discuss issues. According to Davis Case (2002: Chapter 9), semi-structured interviewing is guided only in the sense that some form of interview guide is prepared beforehand, which provides a framework for the interview.

The most useful interview format for conducting qualitative research is often "semi-structured" (sometimes called "moderately scheduled"). This means that the interview is not highly structured, as is the case of an interview that consists of all closed-ended questions, nor is it unstructured, such that the interviewee is simply given the license to talk freely about whatever comes up. Semi-structured interviews offer topics and questions to the interviewee, but are carefully designed to elicit the interviewee's ideas and opinions on the topic of interest, as opposed to leading the interviewee toward preconceived choices. They rely on the interviewer following up with probes to get in-depth information on the relevant topic of interest. Two underlying principles of the following suggestions are, firstly, to strive to avoid leading the interview or imposing meanings, and secondly, to strive to create relaxed, comfortable conversation (Zorn, 2001:1).

This type of interview was chosen for this study as it allows for greater flexibility in pursuing new information as it emerges. Questions around several themes will serve as guidelines for the interviews. Interviews will be conducted with several members directly and indirectly involved with the learners in the specialist centre. Parents, educators, professionals and the learners themselves will be interviewed to obtain information related to this study.

1.4.4.3 Observation

Observation basically means watching something and taking note of anything it does" (www.wordiq.com).

According to Martha Reed (1996), the many important aspects that underlie learning are not always measurable in traditional tests. However, through an educator's careful observations, it is possible to determine which functions are required for the mastery of skills and levels. There are also a range of behaviour expectations that can be observed when the learners interact with the educator, the curriculum and other learners in the classroom. By observing learning events and carefully analysing performance expectations, it is possible for educators to determine individual patterns of strengths and weaknesses.

A study done by De Paul University (1998) found that surveys and interviews often give you someone's opinion, but observation is typically the best way to see what they actually do. Observers can participate or not in the event they are observing; the choice one way or the other will, however, have some impact on the findings.

Given the above literature, I chose to use day-to-day observation to gain valuable research information about learners with Asperger Syndrome in the mainstream secondary school.

As the educator and manager of the specialist centre for learners with Asperger Syndrome, I spent most of my time in the specialist centre and in the school to observe the learners in their natural learning environment to produce first-hand information and data. I also attended meetings and seminars related to specialist centres and inclusive education for learners with Asperger Syndrome. Observations were done in the mainstream school and in the specialist support centre to gain the fullest possible picture of how learners functioned in the inclusive education environment. An observation note-book was given to each support assistant working with a learner from the centre and day-to-day observations for academic achievement/improvement and behaviour in lessons were noted in these books. These note-books formed valuable tools in the research done for this study (see Annexure A).

1.4.4.4 Review of personal records

Personal records relating to the learner's scholastic and medical history were reviewed to obtain important information on the history of each learner. Recorded

information, taken during the establishment of the specialised centre, formed an important part of the study. Careful records were kept of the weekly and day-to-day behaviour as well as indicators of social inclusion and academic performance in the two learning environments. These records are highly confidential so learner's names and personal information were deleted from the documents to make it possible for them to be used in this study (Confidentiality Act, 1991:6).

1.4.5 Data analysis

As Merriam (1998:151) points out, qualitative research does not follow a linear process. Data production and data analysis were therefore a simultaneous, ongoing process. Data analysis was done using the following processes: reflection on the part of the researcher during and after data production as well as content analysis of the data collected through the interviews, observation and review of the records (Merriam, 1998:151; Mertens, 1998:348).

1.5 DESCRIPTION OF CONCEPTS

1.5.1 Educator

According to the *The Oxford English Mini-dictionary* (1997), a teacher is a person who "impart(s) information or skill to" another person. In a study done by Bhavnagri and Vaswani (1999:297) educators are viewed as teachers who not only teach the school's curriculum, but also see to other needs of learners, such as their health. Therefore, I have chosen to make use of the all-embracing word 'educators' and not 'teachers'. The educators in this study are the adults who educate at the secondary school in Wales.

1.5.2 Experience

Experience may be defined as "observation of facts or events, practice in doing something; knowledge or skill gained by this" (*The Oxford English Mini-dictionary*: 1997). It is the knowledge that an individual has gained through his participation in certain activities (Plug, Meyer, Louw & Gouws, 1986:245).

1.5.3 Children/learners/students

According to the Child Care Act 74 of 1983 (South Africa, 1983), children are individuals under the age of 18 years. However, in this study 'children' only indicates individuals between the ages of 11 and 17 years of age - in other words, children at

secondary school age. Throughout this study 'children' are referred to as students or learners. The learners in this study are all boys between the age of 11 and 16 who have a formal diagnosis of Asperger Syndrome who attend a mainstream secondary school in Wales but have the support of a specialist centre.

1.5.4 Learners with special educational needs

Formerly the emphasis was on the learner's needs and the term commonly used was "Learners with Special Educational Needs (LSEN)." According to the NCSNET & NCESS (1997:v,12-19) in the Public Discussion Document: Education for All, the emphasis has shifted to the recognition of the learners needs not being met, because of the system's inability or lack of response to the learners' diversity, thereby limiting the learner's access to effective learning.

For effective learning to be provided and sustained the education system must be able to accommodate a diverse range of needs among the learner population. Sometimes problems in the centre of learning, the education system as a whole, within the wider society or within the learner him/herself which prevent both the learner and systems needs from being met ... These factors which limit or prevent access to education provision are seen as barriers to learning (NCSNET & NCESS, 1997:v).

According to the National Department of Education (2001), all learners with special needs should be included in mainstream life. It is thus clear that South African education authorities support the notion of providing effective education for children with special educational needs in the mainstream education environment.

1.5.5 Support assistants/learner assistants

Support assistants/learner assistants "bear the weight of; strengthen; supply with necessities; help, encourage" (*The Oxford English Mini-dictionary*, 1997, s.v. 'support'). According to Jackson and Veeneman Panyan (2002:201), support indicate practices that assist learners in experiencing stability when their well-being is shaken by internal or external causes. Support assistants provided one-to-one support to learners from the centre when they attended lessons in the mainstream school. The learner's behaviour and response to mainstream lessons was recorded in observation books to provide data for this research. The support assistants mediated the support given by the specialist centre and the mainstream teaching in the school. Support assistants contributed to this research as they noted their observations of the learners in the mainstream education environment in day-to-day note-books.

1.5.6 Inclusion

According to Stout (2001), the WEAC's Director of Instruction and Professional Development, inclusion remains a controversial concept in education, because it relates to educational and social values, as well as to our sense of individual worth.

There are advocates on both sides of the issue. Kauffman (2002:112) views inclusion as a policy driven by an unrealistic expectation that money will be saved. Furthermore, he argues that "trying to force all learners into the inclusion mould is just as coercive and discriminatory as trying to force all learners into the mould of a special education class or residential institution".

Schultz (2001), on the other hand, believes that all learners belong in the ordinary classroom, and that 'good' educators are those who can meet the needs of all the learners, regardless of what those needs may be. She concludes her comments on inclusion by referring to the large groups of educators and parents, between the two extremes, who are confused by the concept itself. According to her, these parents may wonder whether inclusion is legally required and wonder what is best for their children. Parents may also question what it is that schools and school personnel must do to meet the needs of children with disabilities.

In order to discuss the concept of inclusion, it is first necessary to define the terms that will be used. Research Bulletin Number 11 (1993:1-8) from Phi Delta Kappa's Centre for Evaluation, Development, and Research provides a useful set of definitions. The following have been edited for clarity.

1.5.6.1 Mainstreaming

According to the *Research Bulletin* Number 11 (1993:1), mainstreaming has been used to refer to the selective placement of special education learners in one or more "regular" education classes. Proponents of mainstreaming generally assume that a learner must "earn" his or her opportunity to be placed in regular classes by demonstrating an ability to "keep up" with the work assigned by the regular classroom teacher. This concept is closely linked to traditional forms of special education service delivery.

1.5.6.2 Inclusion

The *Research Bulletin* Number 11 (1993:2) also states that inclusion is a term which expresses a commitment to educate each learner, to the maximum extent

appropriate, in the school and classroom he or she would otherwise attend. It involves bringing the support services to the learner (rather than moving the learner to the services) and requires only that the learner will benefit from being in the class (rather than having to keep up with the other learners). Proponents of inclusion generally favour newer forms of education service delivery.

1.5.6.3 Full inclusion

Full inclusion means that all learners, regardless of handicapping condition or severity, will be in a regular classroom/programme full time. All services must be taken to the learner in that setting (*Research Bulletin*, [11] 1993:2).

In addition to problems related to definitions, it should also be understood that there is often a philosophical or conceptual distinction made between mainstreaming and inclusion. Those who support the idea of mainstreaming believe that a learner with disabilities first belongs in the special education environment and that the learner must earn his/her way into the regular education environment.

In contrast, those who support inclusion - such as E.T Baker, M.C. Wang and H.J. Walberg (1994-1995:33-35) - believe that the learners should always begin their education in an ordinary school environment and be removed only when appropriate services cannot be provided in the regular classroom.

The term inclusion is used in so many different contexts in so many different countries, as will be seen in Chapter 2. It is therefore very difficult to offer a succinct summary which does justice to the complexity of the term. A few more descriptions of inclusion might give a broad idea of what it entails.

Table 1.1: Descriptions for inclusion

Publication/Author	Descriptions
D.N.E. (1997:53-60)	Inclusion is the full participation of all persons, regardless of difference, in the daily activities at school, at work and at home of their communities. Inclusive education is the promotion of equal participation of and non-discrimination against all learners in the learning process, irrespective of their disabilities, within a single, seamless education system. It presupposes the provision of support to enable participation where access would otherwise be difficult.
Etscheidt (1998)	Inclusion is based on the belief that all people function in inclusive communities; work with people of different races, religions, aspirations, and disabilities. In the same instance, learners of all ages should learn and grow in environments that resemble the environments that they will eventually work in.
Heston (2001)	Once good inclusion is in place, the learner who needs the inclusion does not stand out. The inclusive curriculum should include strong parental involvement, learners making choices, and a lot of hands-on and heads-on involvement.
Wilson (2001)	If you view schools as inclusive and are looking for ways to educate that benefit all learners, then that's inclusive.

"Education, then, beyond all other devices of human origin, is the great equalizer of the conditions of men - the balance-wheel of the social machinery" (Horace Mann Messerli, 1972).

1.6 LEARNERS WHO HAVE ASPERGER SYNDROME

Asperger Syndrome is a neurobiological disorder named after a Viennese physician, Hans Asperger, who published a paper in 1944 which described a pattern of behaviours in several young boys who had normal intelligence and language development, but who also exhibited autistic-like behaviours and marked deficiencies in social and communication skills. In spite of the publication of his paper in the 1940s, it was not until 1994 that Asperger Syndrome was added to the DSM IV (see Table 1.2) and only in the past few years has Asperger Syndrome been recognized by professionals and parents (Cumine, Leach & Stevenson, 2002:1).

Asperger Syndrome will be discussed in more depth in the next chapter.

Table 1.2: Diagnostic Criteria for 299.80 Asperger's Disorder

<p>A. Qualitative impairment in social interaction, as manifested by at least two of the following:</p> <ol style="list-style-type: none"> 1. marked impairments in the use of multiple nonverbal behaviours such as eye-to-eye gaze, facial expression, body postures, and gestures to regulate social interaction 2. failure to develop peer relationships appropriate to developmental level 3. a lack of spontaneous seeking to share enjoyment, interests, or achievements with other people (e.g. by a lack of showing, bringing, or pointing out objects of interest to other people) 4. lack of social or emotional reciprocity
<p>B. Restricted repetitive and stereotyped patterns of behaviour, interests, and activities, as manifested by at least one of the following:</p> <ol style="list-style-type: none"> 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
<p>C. The disturbance causes clinically significant impairment in social, occupational, or other important areas of functioning</p>
<p>D. There is no clinically significant general delay in language (e.g., single words used by age 2 years, communicative phrases used by age 3 years)</p>
<p>E. There is no clinically significant delay in cognitive development or in the development of age-appropriate self-help skills, adaptive behaviour (other than social interaction), and curiosity about the environment in childhood</p>
<p>F. Criteria are not met for another specific Pervasive Developmental Disorder or Schizophrenia</p>

(DSM IV –TR, 2000:84)

1.7 STRUCTURE OF PRESENTATION

A brief outline of the research report follows below.

Chapter One provides an orientation to the study, outlining the research questions, approach and method used. Chapter Two deals with the literature review and the education of learners who have Asperger Syndrome. Literature on inclusive education is reviewed, including literature from various countries. As survey of some

of the specialist centres for learners with Asperger Syndrome in the mainstream is also provided. Chapter Three discusses the research design and the research methodology, while Chapters Four and Five deal with the data production procedure, the data analysis, the findings, the discussion, the implications for South Africa and how the findings can prove valuable for those working in a very different context in South Africa. Finally, some recommendations will be made.

1.8 SUMMARY

Chapter One contextualised the research question, in the reform that is currently an issue in the education systems of Wales and possibly South Africa. It also provided the rationale for the assumption some of the insights of the study might prove valuable to those working in a very different context in South Africa. In this chapter, the research question was formulated and the research method explained. The salient terms were discussed and, lastly, a structure of the ensuing report was provided. The following chapter will provide a broader view of the Asperger Syndrome phenomenon as related to the issue of inclusion, by discussing the relevant literature.

CHAPTER 2

EDUCATION OF LEARNERS WHO HAVE ASPERGER SYNDROME AND AN INCLUSIVE EDUCATION SYSTEM

2.1 INTRODUCTION

This chapter begins with a discussion of learners with Asperger Syndrome, which falls under Autism, and the provision made to accommodate their specific educational needs in mainstream schools. Next, an international perspective will be presented with a specific focus on patterns of placement. This will be followed by a discussion of the South African perspective on educating learners with Asperger Syndrome or high-functioning autism. The move towards inclusive education in Wales and South Africa will be outlined, paying particular attention to some of the main features of successful inclusion of learners who have Asperger Syndrome in mainstream secondary schools. Here the focus will fall on the role of specialist centres attached to mainstream schools. In the final part of the chapter, a list is given of the important indicators of successful inclusion of learners with Asperger Syndrome into the mainstream education system.

2.2 LEARNERS WITH ASPERGER SYNDROME

2.2.1 Profile of a learner with Asperger Syndrome

Autism Spectrum Disorders is a generic term used to describe people who have in common a set of characteristics defined by Wing and Gould (1979) as the Triad of Impairment. It is important to note that individuals with Autism Spectrum Disorders could range from those with severe learning difficulties to those with above-average intelligence. According to Frith (1989:31), people with Autism Spectrum Disorders who are highly intelligent may be referred to as having Asperger Syndrome or high-functioning autism. The three aspects of the triad can be summarised as follows:

- Qualitative impairment of reciprocal social interaction
- Qualitative impairment in verbal and non-verbal communication

- Impaired imaginative skills with a markedly restricted repertoire of activities and interests.

Frith (1989:33) explains the implications of these impairments. Impairment in social interaction might cause learners to appear aloof or indifferent. They may have unusual and special interests and general difficulty in behaving in a sociable manner. These learners may also dislike being held or touched and show unusual reactions to pain, pleasure or sensory stimuli (light or sound). Impairments in social communication, on the other hand, may mean that learners show little desire to communicate, unless driven by their immediate needs. Other possible indications of impairment in social communication may be not pointing to draw attention to objects or an inability to engage in a reciprocal conversation. Although these learners appear to be engaged in communicating, close observation would reveal that the conversation is one-sided with little listening on the part of the learner with this impairment. Consequently, a number of the responses are inappropriate. Misunderstandings often arise as speech may be interpreted literally.

Impairment of imaginative skills (and concomitantly flexible thinking) may result in an absence of copying and pretend play. What is often seen is the repetitive use of toys or objects and a lack of empathy with the feelings of others.

The National Autistic Society (NAS) of the United Kingdom (1998:3) recommends that educators be on the look out for these three key traits:

- An individual's difficulty in communicating and relating to others;
- An individual's inability to play imaginatively or think in abstract ways;
- An individual's insistence on set routines or following elaborate rituals.

It must be noted that no single trait provides sufficient evidence of the condition. However, educators need to be aware of the key signs and have knowledge of the educational consequences once they have been detected (National Autistic Society, 1998).

Asperger Syndrome affects several main areas of a person's functioning. According to the aspergers.com website, these areas include:

- Communication
- Social Interaction

- Narrow Interests/Preoccupations
- Repetitive routines/rituals, inflexibility.

(<http://www.aspergers.com/asptrt.htm>, Sept. 13, 2001)

According to Bauer (Sept. 26, 2001), a developmental paediatrician and Director of the Developmental Unit in the Department of Paediatrics at Genesee Hospital in Rochester New York, learners with Asperger Syndrome usually have "normal or high verbal intelligence", but they often cannot read social cues and non-verbal communication, resulting in "one-sided, long-winded lecturing." They may be perceived as rude, abrupt or awkward, frequently talking "at" a listener rather than "to" one. This is often magnified by a monotone or a robot-like tone of speech so learners suffering from Asperger Syndrome may be criticized for sounding different from other learners. Furthermore, he points out that learners with Asperger Syndrome may often talk incessantly on a topic of interest only to themselves without realizing the boredom of the listener. Learners with Asperger Syndrome also find it difficult to interpret figurative language and so make interpret it literally. They may repeat a sentence or phrase rather than use it in an appropriate context. All of these difficulties plus a lack of empathy with others make it difficult for a learner with Asperger Syndrome to make age-appropriate friends. This often makes them the targets of bullies.

Bauer (Sept. 26, 2001) adds that learners with Asperger Syndrome also become pre-occupied with narrow areas of interests and may become agitated if they are forced to disengage from those specific activities or topics. These learners are repetitive and develop ritualistic routines about which they are inflexible.

Many parents and educators are unsure of their role and how to deal with this 'new' syndrome. According to Bauer (Sept. 26, 2001), this situation will change. Expressing a similar view, the Oasis guide (2001:63) argues that this generation - our youth - will be the first with Asperger Syndrome to have the benefit of the understanding, knowledge, research, treatment and intervention that have become available in the last ten years. While no one can say with certainty what lies ahead for any learner, the small daily victories they can achieve thanks to information, awareness and the appropriate use of therapies and interventions are glimpses of promise.

2.2.2 Other diagnostic profiles of Asperger Syndrome

In the first chapter I mentioned the DSM IV-TR (2000:84) and gave a brief outline of the diagnostic criteria for Asperger Syndrome. However, there are tremendous variations. According to the University of Massachusetts Medical School (2002), some learners with Asperger Syndrome are relatively quiet and docile and, in this respect, easier to live with. Others are quite unpredictable, even volatile, and extremely hard to manage. The most simple, mundane things most people take for granted - the natural, unquestioning way people get through the day - parents of children with Asperger Syndrome may be unable to do. For example, some children persist in ways that turn family life upside down and some become profoundly upset if they think things are not the way they are supposed to be. Some are terrible sleepers and some may be difficult to bring out in public because of behavioural outbursts. A study done by the University of Massachusetts Medical School (2001) points out that, while the parents of children with Asperger Syndrome desperately need time away from them, this is difficult to achieve. It is far from easy to find babysitters for such children. Most teenaged babysitters are unable and unwilling to deal with the challenges such children provide, and many parents feel uneasy about leaving their child for any length of time. It is often almost impossible for them to impose on their neighbours, friends, or even family for a short while in the way many other parents do.

This study also revealed that the reaction of others often complicates the difficulties parents face. One of the most painful aspects of raising a child on the Autism Spectrum can be the stares, disapproving looks and critical remarks from passers-by. This issue is often particularly problematic in families in which the children look outwardly normal (and most of them do). Because they look normal and are usually quite bright, children (and adults for that matter) are especially likely to be wrongly perceived as wilfully defiant. Many times their "defiant" behaviour is due to misreading a situation or being incapable of effectively dealing with frustration. Confrontations in schools are often the result of the educators and school administrators' inadequate understanding of the syndrome. Sometimes not even the parents realize that their children are not intentionally challenging authority.

The findings of this study from the University of Massachusetts Medical School (2001) reveal that it is important not only for educators and professionals but also members of the general public to have an awareness and understanding of the

nature of this syndrome. Learners and other people with Asperger Syndrome will not be able to benefit fully from participating in the mainstream of life otherwise.

2.2.3 Intrinsic factors

2.2.3.1 *Learning difficulties that might co-exist with Asperger Syndrome*

Learners with Asperger Syndrome experience some difficulties in learning via the traditional methods used in schools (Attwood, 2000:29). In this section, however, the term learning difficulties is not used to refer to difficulty which relates to the use of particular methods. It refers to the difficulty those who are below average intellectual ability experience. Getting exact figures on the proportion of those with Asperger Syndrome who have learning difficulties is problematic. According to Baird (2000:10), it was thought that they were in the majority, but a recent study suggests that there may be more learners with Asperger Syndrome of average or above-average intellectual ability than there are of below-average ability. Moreover, a significant number of learners with Asperger Syndrome will also be intellectually well above average (Baird 2000:269-80).

The problem is that Asperger Syndrome symptoms are often unrecognised and undiagnosed in learners with learning difficulties (Baird, 2000). Hadwin and Hutley (1998:269–80) developed a questionnaire to identify the particular characteristics of learners with Asperger Syndrome who also have learning difficulties. They found that learners with Asperger Syndrome show less sustained attention, less eye gaze and less functional and imaginative play, and more unusual or restricted motor behaviours than those learners with severe learning difficulties alone.

Jordan (2001:23) has recently written about the particular needs of those with Asperger Syndrome and severe learning difficulties. Some argue that the usual approaches taken with learners with severe learning disabilities are sufficient. However, Jordan (2001:24) argues strongly that in order to meet particular needs of learners with Asperger Syndrome a different approach must be used.

2.2.3.2 *Additional diagnoses*

Learners with Asperger Syndrome can have other disorders too. Volkmar and Nelson (1990:127-129) state that it is estimated that about one third of learners with Asperger Syndrome have epilepsy, which often develops in late childhood or adolescence. Some learners might have dual or multiple diagnoses (e.g. a serious

visual impairment) (Cass, 1998) or hearing loss, cerebral palsy, or Down's syndrome (Kent *et al.*, 1998). Gillberg (2000) has estimated that about 10 per cent of learners with Down's Syndrome have Asperger Syndrome. According to Jones (2002), there is evidence that some with a dual diagnosis are only diagnosed in terms of their impairment and that the Asperger Syndrome is often missed. Other conditions associated with Asperger Syndrome are tuberous sclerosis, Fragile-X Syndrome and Tourette Syndrome.

2.2.3.3 Gender and ethnicity

According to Lord and Schopler (1987:205), four or five times as many males as females have autism in the group with learning difficulties and it is thought there may be ten times as many males as females in the high-ability group. Wing (1981:129-37) has suggested that perhaps males are more susceptible to Asperger Syndrome. According to the Medical Research Council (2001), Asperger Syndrome might be harder to detect in females, as they may have greater social empathy than males and diagnostic tools may need to be modified accordingly. Jones (2002:109) argues that although children from all cultures and social groups have been diagnosed, further work needs to be done to evaluate ethnic differences and to improve awareness within ethnic minorities. At present ethnic minorities are under-represented in referrals for diagnosis and attendance at support groups and workshops.

2.2.3.4 Cause

A recent report by the Medical Research Council (2001:19-24) in the United Kingdom, which reviewed the available evidence on causes, contends that there is now '*overwhelming evidence for a biological basis and a strong genetic component*'. Most researchers believe that Asperger Syndrome has a variety of causes, perhaps all affecting the same brain systems (MRC, 2001:21). It is thought that there are several genes, which act together with environmental factors to cause Asperger Syndrome, but it is not yet known which these are (Bailey *et al.*, 1996; Bolton *et al.*, 1994; LeCouteur *et al.*, 1996; Rutter, 1996). There are several environmental triggers being studied, although none have, as yet, been scientifically validated. These include illness during pregnancy, childhood illness, food intolerance, and reactions to vaccination and pollutants. It is often difficult to separate real causes from events such as illness, injury or vaccinations, which occur coincidentally at the

time the learner's difficulties, become most apparent. Many children experience problems during birth, have serious illness or other trauma, but do not develop Asperger Syndrome, so there are clearly other factors involved (Jones, 2002:120).

2.2.3.5 Psychological theories

There are a number of psychological theories, which attempt to explain the behaviours seen in learners with Asperger Syndrome and how individuals with Asperger Syndrome perceive, process and understand the world. Three recent theories by Baron-Cohen (2000:29) focus on theory of mind, executive functioning and central coherence. According to Baron-Cohen (2000:29), those working on *theory of mind* propose that individuals with Asperger Syndrome lack the ability to read and interpret others' emotional and mental states, which may explain the social and communication difficulties seen. This reading of emotional and mental states, by looking at people's faces or listening to their tone of voice, is called mind reading. Mind reading generally develops naturally and is not something which is taught to learners (Baron-Cohen, 2000:35). Jones (2002:125) contends that mind reading develops through sharing attention and common interests, and engaging in pretend play. At the age of about four years, children start to lie when they see the potential in making someone else think that something is true when it is not. Learners with Asperger Syndrome tend not to lie and have problems in understanding that someone else is lying to them. This makes them particularly vulnerable. More able individuals with Asperger Syndrome can eventually work out how others think, but it takes a great deal of effort (Jones, 2002:125-127).

According to Ozonoff (1995:62-70) and Russell (1997:97), some psychologists argue that individuals with Asperger Syndrome have difficulties in *executive functioning*, planning and monitoring actions, in inhibiting behaviours and in shifting attention. They also have problems in generating ideas and adapting responses to suit different situations. According to Happe (1999:215-29), the third theory suggests that individuals with Asperger Syndrome have *weak central coherence*, so they focus more on detail and have problems in integrating the components to obtain the whole picture (e.g. when riding a bike; scanning a picture; understanding the gist of a story). Jones (2002:126-127) points out that individuals with Asperger Syndrome often have very good visual memories of unrelated things, but slightly awkward formulation of information and complex patterns. Differences in central coherence

might explain the development of special interests and high levels of skill in particular areas.

As Howlin (1998:121) points out, some materials have been developed for teaching theory of mind. However, although some learners can successfully be taught the skills to pass theory of mind tasks, these may not be generalised and such teaching may not influence the learner's social competence in everyday encounters. According to Attwood (2000), it will probably be more effective to teach learners these skills as and when they are engaged in 'everyday' interactions, using such strategies as social commentaries, social stories and circles of friends. According to Attwood (2000), the difficulties learners have in planning, sequencing and shifting attention need to be taken into account. Adults need to give learners sufficient time to respond and complete tasks and to provide visual cues for the different stages involved. Jones (2002:125–127) argues that the implications arising from the weak central coherence theory are that time needs to be given to explain and describe the bigger picture, to ensure that the learner has processed and understood the other meanings conveyed within a story, a situation or a task.

2.2.3.6 Parameters of Asperger Syndrome

According to Frith (1991:48), Asperger Syndrome is a Pervasive Developmental Disorder characterized by deficits in social interaction and motor coordination, and unusual or restricted patterns of interest or behaviour. Clinically, the distinction between autism and Asperger Syndrome is often made in terms of severity and in the qualitative expression of the criteria. Both syndromes are characterized by social interaction deficits, impaired communication skills, and unusual or bizarre behaviours. However, in Asperger syndrome, motor deficits are more pronounced, onset seems to be later, and social deficits are present without grossly impaired speech and language (Frith 1991). In DSM-IV-TR (2000:80-84) a diagnosis of Asperger Syndrome requires the absence of any clinically significant delay in language acquisition, cognitive development and adaptive behaviour (with the exception of social interaction). In this way DSM-IV-TR (2000:80-84) clearly distinguishes between the Asperger Syndrome diagnosis and that of autism (which is characterized by more marked delays in these areas prior to three years of age). As can be seen, relatively little is known about Asperger Syndrome at this stage. Parameters for diagnosis have only recently been formulated to provide the consensual definition to do the extensive research that is necessary.

Gillberg (1989:631-8) reports that similarities have been noted between the definition of Asperger Syndrome and that of autism without mental retardation, or high-functioning autism. Mental retardation co-occurs with autism in about 75% of reported cases so the DSM-IV-TR (2000:80-84) definition allows for learners who do not demonstrate measured intelligence in the mentally retarded range. Currently there are no widely accepted diagnostic guidelines specifically for high-functioning autism. According to the American Psychiatric Association (1994:4), high-functioning autism may be most appropriately diagnosed when the criteria for Asperger Syndrome are met and full-scale IQ exceeds the intellectual disability range. As compared to Asperger Syndrome, high-functioning autism learners generally have lower full-scale IQs (Gillberg, 1989, Ozonoff & Farham, 1994). According to Gillberg (1989:63-108), there may be more of a family history in Asperger Syndrome, especially in fathers of children with Asperger Syndrome, than in high-functioning autism. Gillberg, Steffenburg and Schaumann (1991:403-0) consider that motor clumsiness may be more characteristic of Asperger Syndrome, whereas motor mannerisms may appear more in association with high-functioning autism.

Gillberg and Gillberg (1989:631-8) note that abnormalities and delays in language and communication may be more severe in high-functioning autism than in Asperger Syndrome. Peculiarities of speech and language may nonetheless be present in learners eventually identified as having Asperger Syndrome. Hart, Bax and Jenkins (1978:442-52) state that, since most cases of Asperger Syndrome are diagnosed only at approximately age seven or later, data regarding early language development usually depends largely on recollections by parents, which may not be reliable. In light of the absence of clear evidence to support this, the exclusionary criterion of the absence of language delays for the Asperger Syndrome diagnosis remains controversial (Gillberg, 1995).

According to Kin and Volkmar (1997:119), Asperger Syndrome may also be distinguished from autism on the basis of early attachment patterns. In early childhood Asperger Syndrome is associated with adequate attachment to family members and with approaches to interact with peers (although inappropriate and awkward). In autism, attachment to family members (children's need for closeness) is more atypical and their broader social patterns are characterised by withdrawal and aloofness. Most typical children (children without Asperger Syndrome) will be aware of their absence of their parents or the absence of someone they know.

Children with Asperger Syndrome seem to lack this awareness and might not mind being away from their parents or family.

According to Lockyer and Rutter (1970:152-63) and Happe (1994:215-29), Asperger Syndrome may be most accurately identified through neuropsychological assessment.

Some researchers such as Schopler (1985:76) object to the use of a distinct diagnostic category for a disorder that represents only one point on the "autism continuum." Frith (1991:5) agrees, saying that "Asperger Syndrome is the first plausible variant to crystallise from the Autism Spectrum ... no doubt other variants will follow."

For Wing (1991:93-121), both autism and Asperger Syndrome are best regarded as falling within the continuum of social impairment that may differ in their clinical presentation due to the degree of deficit in the cognitive, language and motor realms. However, Frith (1991:93-121) asserts that, for the time being, the Asperger Syndrome diagnostic category should be retained for clinical reasons. According to Frith (1991:93-121), many parents of children with Asperger Syndrome will find the diagnosis more acceptable than the diagnosis of autism (which, among lay persons, may be associated with extreme withdrawal, unusual stereotypes and self-injurious behaviours). Many children with milder forms of the disorder would be left without a diagnosis and, hence, without the services and understanding they require.

In practice learners may fail to fit neatly into the diagnoses of Asperger Syndrome or autism as sanctioned by the American Psychiatric Association (1994). When a learner presents with pervasive and atypical development, the diagnosis of Pervasive Developmental Disorders - Not Otherwise Specified (PDD-NOS) may be most appropriate. Thus learners who display some characteristics thought to fall on the autistic continuum, but who do not meet the criteria for Asperger Syndrome, may receive the diagnosis of Pervasive Developmental Disorders - Not Otherwise Specified. Whether a subset of Pervasive Developmental Disorders - Not Otherwise Specified cases represents milder Asperger Syndrome or autism is not known, in part because it is difficult to obtain funding for research for any disorder labelled "Not Otherwise Specified" (Klin, 1999:131-148).

2.2.4 Prevalence studies

2.2.4.1 *Problems in establishing prevalence*

According to Jones (2002:220), accurate figures do not exist on the actual number of learners and adults with Asperger Syndrome living in a particular environment. It is often implied that it would be a relatively straightforward exercise to obtain such figures. However, this is not easy. The definitions and diagnostic criteria for Asperger Syndrome are qualitative and largely dependent on observation and the skills and knowledge of those whom the learner meets. Jones (2002:222) points out that there are no medical, bio-chemical or psychological tests for Asperger Syndrome and so there is a possibility of under- and over-identification. Figures giving the prevalence of the syndrome depend on the assessment tools and methods used, and variations between studies will reflect methodological differences. For a single agency or professional group to have data on all individuals with Asperger Syndrome is currently not possible. Employing a person or team within a geographical area to identify and collect these data is also problematic. Even if it were possible to locate every individual diagnosed, there are problems relating to the accuracy of the diagnosis (G. Jones, 2002).

Jones (2002:224) argues that researchers doing epidemiological studies have often asked professionals to identify which learners have a definite diagnosis and which learners have a possible diagnosis of Asperger Syndrome, before doing further checks themselves. But this approach does not pick up learners whom professionals do not put forward. Some surveys have therefore decided to look at every member of a specific population (e.g. every learner attending a particular school) and used a screening instrument to identify those who might have Asperger Syndrome and then do more detailed assessments. There are ethical issues to be considered though, if a research team discovers there is a learner with Asperger Syndrome who has not previously been identified (G. Jones, 2002).

Surveys by Jones and Newson (1992b) in England and Wales and Jordan and Jones (1996) in Scotland have shown that the actual number of learners with Asperger Syndrome known to education authorities often falls far short of the expected figures. Education authorities rarely keep a separate record of the numbers diagnosed so the staff of individual schools have to be consulted. The data produced in this way are unreliable because there might be no record of the diagnosis on the

learner's reports; the respondent may not have sufficient knowledge of autism or of the learners on the roll; some respondents are reluctant to use diagnostic labels; and time constraints often prevent the survey forms being completed adequately. It would be useful for education, social services and health authorities to maintain a shared record of those individuals who are identified, so that accurate data are available for planning and research purposes (Jones, G., 2002).

2.2.4.2 Increase in the numbers of learners diagnosed with Asperger Syndrome

As our knowledge, understanding and awareness increase, more learners with Asperger Syndrome are being identified. According to Wing and Gould (1979:11-29), prevalence studies for classical autism give figures of 4 to 5 per 10,000, rising to 22 per 10 000 for the group with autism and learning difficulties. According to Ehlers and Gillberg (1993:1327-50), a study in mainstream schools in Gothenburg on the prevalence of Asperger Syndrome suggests a much higher prevalence (36 per 10 000) for this group, giving a figure of almost 4 in 1 000.

A recent report produced by the Medical Research Council (2001), which based its figures on two recent reviews of prevalence conducted by Fombonne (1999) and Wing (2001), suggests that there is now fairly strong agreement that Asperger Syndrome affects approximately 60 per 10 000 children under the age of eight and that more narrowly defined autism is found in 10 to 30 per 10 000. The rate for the whole population is likely to be higher, as many older children are missed and not diagnosed until late childhood, adolescence or adulthood. Taking the 60 per 10,000 figure, this would mean that within a mainstream secondary school with 500 learners, one would expect to find about three learners with Asperger Syndrome on the roll, and in an education authority with 50 000 learners, there would be at least 300 learners in total with Asperger Syndrome. According to Jones (2002:101-110), not all these learners will have educational needs that require additional support, but many will, so this is a sizeable number for which an education authority has to provide.

It is difficult to know whether the apparent increase in the number of diagnoses is real or due to the increase in awareness and the ability of professional to diagnose (Gillberg, 1991:403-9). Surveys show that the number identified usually only reaches a rate of 10 per 10 000 or less (Howlin & Moore, 1997; Jordan & Jones, 1996). Wing

(1996b) believes that the higher prevalence rates are a result of the increased diagnosis of learners with severe learning difficulties and those who are high functioning or with Asperger Syndrome. But a growth in the numbers of young children has been recorded in services where good diagnostic systems have been in place for many years (Medical Research Council, 2001:1-6). Environmental factors, such as the increased use of pesticides and other pollutants, are being studied as possible triggers. Further research is required to clarify the position. The recent Medical Research Council's report (2001:3) concludes that:

Methodological differences between studies, changes in diagnostic practice and public and professional awareness are likely causes of apparent increases in prevalence. Whether these factors are sufficient to account for increased numbers of identified individuals, or whether there has been a rise in actual numbers affected, is as yet unclear ...'

2.2.5 Extrinsic factors

2.2.5.1 *Communication difficulties*

According to a survey done by students at the Royal College of Psychiatrists (2003:2), communication difficulties are a particularly handicapping aspect of autism and often the one that first causes concern. Nearly all affected learners have some language delay - both in understanding and in speaking. Very young children may show little interest when people talk to them. More severely affected children may never learn to speak or to communicate in other ways. If they do begin to talk, children may simply echo what they have just heard, or speak in an odd or stereotyped way. Children with Asperger Syndrome, by contrast, can be early talkers. However, their language may be formal or somewhat stereotyped. They have unusual preoccupations, which can interfere with listening and sharing a normal conversation.

According to another survey done by the National Autistic Society (1998:16), some learners are unable to use spoken language as a means of communication. Others who do have language may speak in a repetitive way, reciting learned phrases (echolalia). The spoken language may sound stilted and formal and be accompanied by inappropriate mannerisms and gesture. Often the words spoken are not relevant to the context of the general conversation and there is a reversal of pronouns when questioned. For example, when asked "Do you like swimming?" the reply would often be "You like swimming". This survey shows that a learner may have the

knowledge that a question requires a response or some social interaction, but is unable to provide the relevant information. However, some delayed echolalia may be used in context, for example, where a statement from an earlier conversation is linked to a current event. The learner may talk but the conversation is a monologue, that is to say the speaker is unaware of the listener and avoids eye contact. They also might speak in what could be described as a tactless way, for example, asking a bald man why he does not have hair. In addition, they might respond in a distressed way to jokes and innuendoes. For example, the phrase "I laughed my head off" could be taken literally. Often difficulties may include a lack of empathy with others who are in distress or wounded, and the lack of ability to distinguish between facial expressions and tone of voice. According to the National Autistic Society (1998:19), the following strategies may help to overcome some of these difficulties:

- Using simple, consistent language;
- Giving one instruction at a time and not a sequence;
- Keeping facial expressions and gestures clear and simple;
- Providing visual clues;
- Being sensitive and giving the learner an opportunity to respond;
- Repeating an instruction without rewarding it;
- Setting up situations that might encourage the learner to attempt to communicate;
- Using visual schedules appropriate to the learner's cognitive ability;
- Using mirrors to facilitate a reflex gaze, which is often less threatening;
- Using a variety of therapies (music, aromatherapy, speech and language, occupational) to encourage interactive communication;
- Using Information Technology

According to the National Autistic Society (1998:21-40), augmentative and alternative communication (AAC) can also benefit learners with Asperger Syndrome. Argumentative communication involves the use of aids or techniques that supplement existing vocal skills; alternative communication is a communication method used by a person with little or no speech. Graphic symbols and pictures can

be used effectively with learners who have autism. They provide a constant visual image and they can be physically manipulated. Temple Grandin (1999:3), a person with Asperger Syndrome, speaks about her own thoughts on visual cues:

Every thought I have is represented by a picture. When I think about a dog, I see a series of pictures of specific dogs, such as my student's dog or the dog next door. There is no generalised verbal dog concept in my mind ... I have no vague, abstract language-based concepts in my head, only specific pictures.

The National Autistic Society (1998:69) confirms that symbols can be used individually to represent single words or grouped together to form a sentence. When used in conjunction with electronic communication, they can result in visual messages and synthesised speech. The type of symbols can range from real objects, miniature or part objects, and photographs, to coloured symbols, representational black and white symbols, more abstract forms of symbolic graphics, and writing. The key issue, however, is to make sure that the language taught is functional and that the learner can use it in everyday situations. There are two ways in which symbols can be used: (1) low-tech communication (using graphic symbols) and (2) hi-tech communication (using hardware).

2.2.5.2 Socialising difficulties

According to the National Autism Plan for England, released by the Royal College of Psychiatrists (2003), the effect of the difficulties with verbal and non-verbal communication can cause a person with Asperger Syndrome to find it difficult to form and maintain social relationships. Although many people with classic autism are withdrawn and avoid human contact, this is not usual in people with Asperger Syndrome, who are keen to make friends and may be upset when they find this difficult. A learner with Asperger Syndrome may prefer the company of adults or may prefer playing with much younger learners with less complex social behaviour. Due to a lack of understanding of non-verbal information, people with Asperger Syndrome often do not understand social and cultural 'rules' that others take for granted. They may find it difficult to make appropriate 'small talk' or to know when to pause in a conversation to allow someone else to speak, and may stand too close to someone they are talking to and interrupt and talk over them.

Difficulty Using Non-Verbal Behaviours in Social Interaction

According to the University of Massachusetts Medical School (2002:1-6), there are several broad categories of difficulties falling under the general heading of impairment in social interaction. First of all, people with Asperger Syndrome have difficulty using non-verbal behaviours in social interaction.

Eye contact may be impaired, meaning that the individual may not look at others upon greeting or during conversations and may not respond when others try to catch his/her eye. It is easy to see why others might inaccurately perceive the individual to be rude or not paying attention.

Social smiling may be impaired. In this case, people with Asperger Syndrome may not smile back at someone smiling at them, may not smile during greeting or may not smile in response to something someone else said.

Facial expressions when communicating may be odd. Sometimes the expressions are limited or flat; sometimes they are inappropriate and at other times are exaggerated. Again, it is easy to see why others might misread what the individual with Asperger Syndrome is thinking or feeling. For example, John, a rather sweet and kind child, burst out into laughter when his brother injured himself. Clearly, his response was inappropriate and would not be expected from a child his age. Similarly, Nathan, upon learning that a family friend would be arriving for a visit, let out an excited cry, as if this were the most wonderful and extraordinary event that could possibly happen.

Body postures regulating social interaction may be affected. A very common example of this difficulty is that those with Asperger Syndrome may not know how to judge social distance and may stand too close.

Difficulty Forming Peer Relationships

The second category of difficulties, according to the University of Massachusetts Medical School (2002:1-6), comes under the heading of impairment in social interaction; some learners with Asperger Syndrome find it difficult to form peer relationships. They seem to lack interest in others and may prefer solitary activities. In a case study done by the University of Massachusetts (2002:4), a six-year-old boy named Martin was very skilled at building with blocks and Lego. However, when another child tried to join in, he would become extremely angry, not wanting his play

to be disturbed. Inappropriate overtures towards others or inappropriate responses to the approaches of other people are common occurrences. In another case study a five-year-old boy named James was fascinated by his next-door neighbour, Ben, a toddler of 18 months. Unfortunately, his way of showing his interest in Ben was hitting him over the head. Another child with Asperger Syndrome, Bobby, was somewhat more sophisticated in his technique: his way of showing his interest was throwing his arms around another child in a bear hug. Difficulty forming friendships is a common fact of life for learners with Asperger Syndrome. Interestingly, what these learners mean by friendship may be decidedly different from what their typically developing peers mean. For example, Nick repeatedly referred to another learner in his school, Tom, as his best friend, although no one had observed the two boys talking or playing together. When asked what makes them friends, Nick replied that Tom had said hello to him.

Impairment in group play with peers is another common difficulty. Unfortunately, most of the team sports so common to school-age learners are terribly difficult for learners with Asperger Syndrome. Their troubles with social interaction and peer relationships make organized group sports a real challenge. Oftentimes, they are more successful at sports in which individual achievement is stressed (e.g., track, archery, fishing).

Difficulty in Sharing Enjoyment

The third area of impairment, according to the University of Massachusetts Medical School (2002:5), is difficulty sharing enjoyment. Young learners with Asperger Syndrome are less likely than their typical peers to share objects, such as food or toys, with others. Individuals with Asperger Syndrome are not as likely to show other people items in which they are interested. Lastly, they generally make more limited efforts to share feelings of enjoyment with others.

Lack of Social or Emotional Reciprocity

The fourth kind of social interaction impairment, according to the University of Massachusetts Medical School (2002:5-6), is a lack of social or emotional reciprocity. This area includes such difficulties as inappropriate or limited responses to the approaches of others, as well as limited offers of comfort shown towards others.

For example, Max enjoyed going to the supermarket with his mother. He liked to help prepare the shopping list, easily located the items that were on the shopping list on the shelves, loved to sample the free food that was often available, and calculated the correct change while in the checkout line. However, when the cashier spoke to him and tried to make small talk, he generally did not look at her, did not answer her questions, and sometimes made a remark completely off the topic, but one that was of interest to him.

Similarly, Bob was walking outside with his mother on a cold winter day, when his mother slipped and fell on the ice. Bob was clearly aware something was not quite right, as he immediately began to scream. What he did not do was ask his mother if she were all right, and offer to help her, as a typical child probably would have done.

2.2.5.3 Friendships

In Hans Asperger's original papers (1991:1-5), he describes how the learners with Asperger Syndrome do not join in with others and may even panic if forced to participate in a group. Young learners with Asperger Syndrome do not seem motivated or know how to play with other learners of their age so that they would be 'in tune' with the social activity. They seem quite content with their own company. Sule Wolff (1995:7) quotes a learner who said:

I just can't make friends ... I'd like to be on my own and look at my coin collection. I've got a hamster at home. That's enough company for me ... I can play by myself. I don't need other people.

According to Wolff (1995:8), learners with Asperger Syndrome are more self-centred than selfish. Some of these learners may be observers on the periphery of social play or prefer to be with much younger or older learners. When involved in joint play, there can be a tendency to impose or dictate the activity. According to Wolff (1995:9), learners with Asperger Syndrome can tolerate social contact as long as the other learners play their game according to their rules. Attwood (2000:33-104) confirms this statement by saying that social interaction is sometimes avoided not simply because of a lack of social play skills, but because of a desire to have complete control over the activity. This is illustrated by Donna Williams's (1996:24) description of her childhood:

Kay was from my neighbourhood. She was probably the most popular girl in our year. She'd line up her friends and say: 'You're my first best friend; you're my second best ...'. I was twenty-second. A quiet Yugoslavian girl was last. I was pretty, I was cheerful and sometimes I was entertaining, but I did not know how to play with children. At most, I know how to create very simple games or adventures and sometimes allow others to participate, as long as it was totally on my terms.

According to Attwood (2000:23-92), to include other learners is to risk an alternative script, interpretation or conclusion - that is, you have to share and cope with different ideas. He noted that these learners are not interested in doing the activities other learners want to do and are not inclined to explain what they are doing. They appear to play in a 'bubble' and often resent other learners intruding into their activity. When they intend to play on their own and other learners are inquisitive or want to be sociable, they can be quite abrupt or even aggressive as a means of ensuring their solitude. They often prefer to be left alone to continue their activity uninterrupted. During school lunchtimes these learners are often found on their own in a secluded area of the playground, sometimes talking to themselves or in the library reading about their particular interest. One learner, when asked why he did not talk to other learners in the playground, replied 'No thank you. I don't have to.' According to Attwood (2000:23-92), these learners have a strong preference for interacting with adults, finding them far more interesting, knowledgeable, and more tolerant and accommodating of their lack of social awareness. Attwood (2000:30-9) explains that learners with Asperger Syndrome do not see themselves as members of a particular group and follow their own interest rather than those of the other learners in the playground or class. They are often not interested in competitive sports or team games. In an example given by Attwood (2000:30-39) he explains that during a game of rounders (a cross between cricket and baseball) the learner with Asperger Syndrome was able to bat and bowl as well as the other members of his team. When a team-mate was running, all the others cheered and jumped with excitement to encourage his success. But the learner with Asperger Syndrome stood still and remained emotionless as a butterfly had distracted him. He had no interest in the success of his team. In another interview with Attwood (2000:32-45) an adolescent with Asperger Syndrome described how he was unable to appreciate the feeling of triumph in team sports, as he could not comprehend how or why you would have a sense of satisfaction in knowing that your opponents felt inferior. Learners with Asperger Syndrome can be indifferent to peer pressure to have the latest toys or

clothes, are rarely invited to parties and have few genuine friends. Younger learners can become indifferent to such isolation, content to play by themselves or with their brothers and sisters. Older learners become aware of their isolation and, in time, are genuinely motivated to socialise with learners of their age. However, it becomes apparent that their social play skills are immature and rigid and they are often rebuffed by other learners. This is perhaps one of the saddest moments for parents (Attwood, 2000:20–45).

2.2.6 Outcome

As learners with Asperger Syndrome grow older, their understanding and skills increase and, for some, their Asperger Syndrome traits become harder to detect. Studies done by DeMeyer (1873:199-246) and Freeman (1991:479-82) have shown that intellectual ability, language development, the severity of the original symptoms and the quality of learners with Asperger Syndrome's educational experience are the main determinants of future outcomes. According to Schreibman (1988:94) and Venter (1992:489-507), expressive language level is probably the strongest indicator of outcome and prognosis and, according to Koegel (2000:383-91), it seems more favourable for those who initiate social interaction. Kaufman (1976) and Perry (1995:232-237) state that there have been claims of recovery from autism, but the majority view is that Asperger Syndrome is a lifelong condition.

Gerland (1997) and Sainsbury (2000) report that over recent years education interventions and services have been developed and enhanced. They also note that the depressing outcomes reported in earlier texts on autism are no longer valid. In these accounts the impression was given that it was not possible for those with Asperger Syndrome to make significant progress. But these accounts were often based on inadequate provision and on individuals with the greatest difficulties, who were then the main group being diagnosed. Although there is still much to do in terms of creating effective provision for all learners with Asperger Syndrome and for supporting adults with Asperger Syndrome, overall those diagnosed with Asperger Syndrome receive much more appropriate provision than they did 10 or 20 years ago. In addition, individuals who are more able or have less severe autism are being identified and diagnosed. According to Sainsbury (2000), some individuals with Asperger Syndrome (an unknown number of whom are not diagnosed) have always lived independently, been in employment and may have had a partner and children. The proportion of individuals in this group is likely to increase as provision becomes

more effective. Gerland (1997) argues that these adults are able to lead independent, successful lives and may not gain from being told they have Asperger Syndrome. Others say that knowing their diagnosis has helped them to make sense of themselves.

2.2.7 Optimism

Finally, it is important to foster and maintain a positive and optimistic approach. The success of those with Asperger Syndrome should be publicised and disseminated to show that, given appropriate support and resources, the difficulties arising from Asperger Syndrome can be managed effectively and particular interests and skills maximised and valued. It is frequently the response of others that creates the greatest problems for the individual and the family. Increasing awareness of Asperger Syndrome and changing these responses are likely to enhance the lives of people with Asperger Syndrome. Adopting perspectives which promote optimism and inclusion, and a belief that teaching staff and parents can make a difference, are essential. Three examples of such perspectives are described below.

The first is taken from Carol Gray (2000:1-32), who has an optimistic view of the way forward. She maintains what 'we hold more than half the solution' and argues that it is misleading and unfair to refer to a person with Asperger Syndrome as having a social or communication impairment. This implies that the problem and the solution rest solely with the individual, when in fact staff, parents, siblings and classmates can alter their language and style of interaction, the demands they make and the environment they create to suit the person's understanding and skills. Taking this view is very enabling, as it illustrates there is much others can do to improve the daily lives of those with Asperger Syndrome.

The second example draws from the comments of individuals with Asperger Syndrome themselves (Grandin, 1995; Williams, 1996; Gerland, 1997). It is clear that they have a different experience of the world and particular skills and interests, which provide fresh insights, some of which lead to valuable discoveries and careers. Schools and colleges, should value these qualities rather than trying to change individuals with Asperger Syndrome to behave and respond like others.

The third perspective is to view the difficulties in learning that result from Asperger Syndrome as differences, since, as for other conditions, they only become difficulties if they are not accommodated (Jordan & Jones, 1999:101-10). Jordan (2001:6)

points out that, as in other areas of disability, Asperger Syndrome is no longer viewed as a pathological state, but as 'a feature of normal biological variation which may have evolutionary advantages as well as disadvantages and where problems arising from the condition are seen as the result of social attitudes rather than actual disabilities'.

According to Hesmondhalgh and Breakey (2001:1-256), educating learners with Asperger Syndrome can be challenging and rewarding, but can also cause the educators to feel some sort of failure; not even experienced staff always have a solution to the problems which arise. Jordan (2001:27) and Jones (2002:307-322) contend that one needs to be a good detective when working and living with a learner with Asperger Syndrome, collecting evidence from the learner's reactions and from the available literature, to determine the response which is likely to lead to success.

2.3 EDUCATIONAL PROVISION FOR LEARNERS WITH ASPERGER SYNDROME

According to Jones (2002:307-322), school is one of the most challenging environments for learners with Asperger Syndrome, because of the social demands and potential for sensory overload. Accounts from adults with Asperger Syndrome confirm that schools can be confusing and frightening places. Alison Hale (1998:8) remembers school as follows:

I am being transported to that place, that vast place where the screams, voices, bangs, the footsteps combine to make this painful deafening confusing mush of sound.

Jones (2002:307-322) argues that unless learners are helped to create order from chaos, they are not likely to learn effectively. With a growing consensus of what seems effective, the increase in training and understanding of Asperger Syndrome, and the willingness and ability of staff in special and mainstream schools to make different provision for these learners in terms of the curriculum and environment, more schools are becoming able to meet the needs of learners with Asperger Syndrome. In my own experience the education authorities in Wales have responded in different ways in terms of the placements they have established and funded. Currently, a range of specialist provisions in mainstream schools are developing. Learners might attend a mainstream school, a generic special school, or a centre or

unit which specialises in Asperger Syndrome. Some education authorities will aim to include a greater proportion of learners in mainstream schools than others.

2.3.1 Choosing a school for a learner with Asperger Syndrome

During the course of diagnosis and assessment, parents will generally ask a range of professionals for advice on which school would best suit their child, whether or not the professional is employed by the education authority. So speech and language therapists, paediatricians, social workers, voluntary workers and independent psychologists might give their views on this. Jones (2002:307-322) feels that, where definitive statements are made by professionals, certain hopes or expectations can be generated which might not be fulfilled. Their judgements may also run counter to those of education authorities. This can lead to some confusion and anxiety for parents. Examples of such statements are given in the following recommendations contained in reports from parents. The first is from a psychologist who did not have knowledge of local provision and the second is from a paediatrician. The first extract was taken from an interview that Jones (2002:307-322) had with a psychologist in the United Kingdom:

In my experience, learners like N require a total communication package which is not possible to provide in a day school.

The second extract was taken from an interview that Jones (2002:307-322) had with a paediatrician in the United Kingdom:

In our opinion, J needs to attend a school which specialises in Asperger Syndrome.

Jones (2002:307-322) argues that judgements like these coming from a professional whom the parents have grown to trust often result in the 'battle' and 'fights' with education authorities (who have a different view) to which some parents refer. Fortunately, different agencies and disciplines are increasingly working together, so that discussions on who should advise parents on educational placements are taking place. Such conflict can be avoided.

Parent partnership and mediation

The new Code of Practice in Wales (DfES, 2001:2-18) sets out the duties of the Parent Partnership Service and the responsibilities of the Local Education Authorities in relation to the service. Local Education Authorities have to ensure that parents

and schools are given clear information about parent partnership and other sources of support. The Parent Partnership Service can help parents during the process of choosing a school. In addition, a new service, known as the Disagreement Resolution Service, has been established, where trained mediators can help to resolve disagreements between the parents and an education authority.

Questions to ask when choosing a school

In Wales a range of educational provisions exist for learners with Asperger Syndrome from mainstream to special to specialist. Not all schools in the same category provide the same opportunities or interventions. Deciding which school is most appropriate in a given geographical area is a complex decision. If the goal of full inclusion in the mainstream is achieved nationwide, and all learners with Asperger Syndrome attend their local school, then the need for discussion about which school type will disappear. Instead the focus will be on which particular interventions will enable a particular learner to participate in the curriculum and the broader life of the school.

Jones (2002:307-322) feels that parents need support when deciding on a school for their child. An educational psychologist is often a key person. The issue of whether formal educational assessment is required leading to a statement or record of needs is often a major concern of parents. Under the new Code of Practice in Wales (DfES, 2001:2-18), a school-aged learner with Asperger Syndrome might be at any stage of the school's special needs inclusion programme. The needs of some learners with Asperger Syndrome can be met in a mainstream school without a statement or a record of needs. The staff can devise an Individual Education Plan (IEP) in consultation with others, including the psychologist. According to Jones (2002:307-322), there will be some learners who need more help than a mainstream school can provide from the resources normally available to them in that education authority, and a learner might then need a statement or a record of needs to obtain and secure this support. In addition, where it is thought that a mainstream school might not meet the needs of a learner, and placement in a special school or unit might be required, a statutory assessment would need to be conducted to determine which provision would meet their needs.

Many factors determine the provision made and the learner's characteristics alone may not be the major determinant. It is therefore possible to find similar learners with

Asperger Syndrome in a range of different settings. In addition, the practice found within a particular type of school varies considerably depending on the staff, their experience, their access to training, and the view and skills of visiting professionals. According to Jones (2002:307-322), one mainstream school might be able to meet the needs of a learner very well, whereas another mainstream school might not, and the same is true for special schools and units. One has to look beyond the label and ascertain the practice and ethos within. Jones (2002:307-322) argues that the failure of a learner within a school often has more to do with the features of the school and attitudes of the staff than the behaviour or characteristics of the learner, and yet the statement, 'He failed in a mainstream school', is often heard, placing responsibility for the failure on the learner.

Parents and professionals need to look at a range of possible options when trying to determine which provision would best meet the needs of the learner. Whichever school is chosen, there will be a set of associated advantages and disadvantages. According to Jones (2002:307-322), it is necessary to consider what the school is unable to provide currently and whether what is required can be offered within the school or elsewhere. Schools and units differ on a number of variables; as shown in Diagram 2.1, these variables will be weighted differently by professionals and parents depending on their experience and attitudes and the authority's policy. Jones (2002:307-322) argues that professionals might differ in their views on what is most appropriate and parents may not agree with the education department's recommendations. Careful and considered negotiations are required to reach a consensus. Jones (2002:307-322) recommends that for all possible schools or units potentially available to a learner, a balance sheet could be drawn up with the parents on the advantages and disadvantages of each. Attempts can be made to reduce the disadvantages and to compare one school or unit with another, so that an informed choice is made. All schools are encouraged to produce a booklet about the school, but these often do not give great detail on teaching practice, especially with regard to learners with particular needs.

Diagram 2.1: Variables indicating which schools and units might offer support

- Staff expertise and experience
- Staff-learner ratio
- The nature and amount of individual teaching
- The curriculum and the focus of the work
- Characteristics of the peer group
- The distance from home
- The nature of parental involvement
- Whether they are residential or day
- Opportunities for spending time with learners without Asperger Syndrome
- Access to information on Asperger Syndrome or to specialist advisory support
- Therapy and resources available
- Teaching approaches used
- Size of classes and of the school
- Flexibility and differentiation to meet individual needs
- Staff characteristics (e.g. expertise, empathy, openness)

(Attwood, 2000)

2.3.2 Features which are likely to create an effective placement

Parents, visiting professionals and staff who want to evaluate the potential effectiveness of a school can reflect on the extent to which the characteristics shown in Diagram 2.2 are true. These features are generally considered to be important for all learners with Asperger Syndrome.

Diagram 2.2 Characteristics which are likely to contribute to effective school placement for learners with Asperger Syndrome

- Flexibility to staff to respond to the different needs of individual learners
- Effective partnership with parents
- Calm and confident staff, who give time for learners to process information
- An approach that develops from a learner's interests and strengths rather than focusing on 'deficits'
- Staff who are knowledgeable about and skilled in Asperger Syndrome
- Staff and learners who are clear on what they are doing and going to do
- Access to peers at an appropriate intellectual and social level in a supportive environment
- A broad and relevant curriculum, which includes communication, social interaction and the development of flexible thinking
- Access to support from speech and language therapy, physiotherapy, occupational therapy, social services, as appropriate
- Support for learners and families, beyond the usual school hours and outside term times.

(Attwood, 2000)

2.3.3 Questions about a learner's current educational placement

According to Attwood (2000:4-85), when staff and learners experience significant difficulties over an extended period of time, it is likely that questions will be raised about whether a placement is in the best interest of the learner.

Other possible placements can be suggested by staff or by the learner's parents. These questions can be discussed at the learner's review meeting with the educating staff involved with the learner's education. Prior to the meeting, it is important to gather clear information on which aspects of the learner's behaviour give rise to these concerns and the extent to which strategies to address these have been devised and effectively implemented. Serious thought needs to be given to the type of help and support the learner needs, how this might be provided and why it is felt that this is difficult or not possible within his/her current school. In addition, good information on other schools which might meet the learner's needs should be elicited.

Attwood (2000:4-85) argues that though it is easy to imagine that there is the perfect school somewhere else, this is rarely the case. Before a placement is changed, it is important to establish how the current placement might be modified to address the presenting problems. Attwood (2000:4-85) also argues that exclusion should not be used as a trigger to change the placement in either mainstream or special schools. Such action often results in the learner spending time out of school, whilst another placement is sought, with the parents having to provide most of the support. This adds to the stress on the family and breaks the routine of school attendance, which might be difficult to re-establish. Where a change of placement is felt necessary, then a detailed case will need to be made to the education authority, which may lead to a full reassessment of the learner's needs and ultimately transfer to another school.

2.3.4 Research evidence on different types of educational placements

There is little research evidence to suggest what the relevant and beneficial effects are of different placements for different learners with Asperger Syndrome. Many assumptions are made in the absence of such evidence. A great deal of time and effort is expended in making decisions on school placement. Many factors influence this decision, in addition to the characteristics of the learner. These include the parents' beliefs and wishes, the experience, knowledge and attitudes of educating

staff and others involved, and available provision. According to Barber (1996:19-24), Barrat and Thomas (1999), and Parker (2000), there is little evidence on which learners benefit most from mainstream or specialist provision, or how best to support inclusion; at this stages the best approach is to make decisions based on what is known of the individual learner's needs and the resources potentially available. To Barber (1996:19-24), and Barrat and Thomas (1999) there are some good examples of managing inclusion effectively and of specialist schools and generic special schools creating an effective environment for learners with Asperger Syndrome (Aird & Lister, 1999; Carpenter *et al.*, 2001; Jordan *et al.*, 1999; McCann & Roberts, 1999). According to Rutter and Bartak (1973:241-70) and Jones (1992b), few studies have been done to evaluate the relative merits of different settings. Only one or two studies have compared the progress of similar learners across different types of setting.

According to Evans (2001:1-66), education authorities/departments should use a tracking document to obtain data on outcomes for learners in the different provision options (Diagram 2.3 and 2.4). The initial record could be entered when the learner is first admitted to school and when he or she leaves that particular school. The document would therefore be completed from then on every time the learner is transferred to a different school. Records could be housed centrally. Local as well as national education authorities could analyse the data from time to time to obtain information on the progress of learners with Asperger Syndrome for evaluation and planning purposes. Having good and comparable, retrospective data would add substantially to the knowledge on the educational routes which learners follow and on the outcomes of different phases of education and, ultimately, in adult life.

Diagram 2.3 Proforma for tackling the educational provision made for learners with Asperger Syndrome

PROFORMA FOR TRACKING THE EDUCATIONAL PROVISION MADE FOR LEARNERS WITH ASPERGER SYNDROME

There is currently little long-term data on the educational routes taken by learners with Asperger Syndrome and on what basis decisions are made about provision. Nor is there much information on their outcome as young adults, and the extent to which earlier provision influences this outcome. Such information would be valuable for devising and planning provision for this group of learners. Below is a possible proforma, which education authorities might use to monitor and track the educational placement of learners with Asperger Syndrome.

The purpose of this form is to collect information on learners with Asperger Syndrome when they transfer out of a school or unit. This information will be collated by the education authority to use for planning provision for this group of learners.

This should be completed by staff in the school/unit, which the learner is leaving during the term before the learner leaves. It should then be sent to a named person within the education authority.

Name of person completing the form:

Position within the school:

Tel:

Date of Completion

1. Name of learner:
2. Date of birth of learner:
3. Main diagnosis:
4. Any additional diagnoses: (e.g. epilepsy, dyslexia, ADHD, Dyspraxia)

5. Name of current school:

6. Type of school/unit: (Please circle)

- a. mainstream mld
sld ebd
specific to autism
- b. EA independent
other EA
- c. dayresidential placement
weekly termly
50 weeks a year

7. Date of admission to the school: Age in Years:

8. Does the learner have a statement/ record of needs? YES NO

If YES, which year was this first issued:

9. Approximate cost of the placement at the school/unit for the learner during the last financial year (excluding any transport costs):

£ per year don't know

10. Did the learner have an assistant allocated specifically to work with them? YES NO

If YES:

- a. for how many hours per week?
- b. to offer support in what type of situation?

11. Please state briefly why the learner is leaving this school/unit

12. Which school/unit is s/he moving on to?

- a. name of school/unit:
- b. Type of school/unit:
Mainstream mld sld
ebd specific to autism
Other, please specify:
- c. EA independent
other EA
- d. day residential placement,
weekly, termly,
50 weeks per year

13. Which factors determine the choice of the next placement and why is it thought suitable for the learner?

14. Skills and abilities of the learner on leaving your school/unit

Diagram 2.4 Proforma for tracking the educational provision made for learners with Asperger Syndrome

Tick all those, which apply or write your own description:

Dimension	Skills	Comment
Expressive language skills	Mainly uses photos/pictures/symbols Mainly uses signs Single spoken words, short phrases; full sentences	
Social Skills	Prefers to be alone Wants friends Is able to work or play with other child/with children	
Behaviours	Less demanding than ordinary peers; More demanding than ordinary peers; Very demanding	
Academic skills	Reading accuracy at his/her age level/Below age level/Well below age level/Not able to read Reading comprehension at his/her age level/below age level/well below age level/not able to read Can write at his/her age level/below age level/well below age level/not able to write	
Overall intellectual ability	Above/average/below average/well below average	

(Evans, 2001:1-66)

2.3.5 Schools, specialist centres and classes which are specific to learners with Asperger Syndrome

According to a study done by the National Autistic Society (2000), specialist provision for Asperger Syndrome includes schools, units (centres) or classes which have been specifically set up for learners with Asperger Syndrome and where the majority of those on the roll have Asperger Syndrome. This category also includes schools which have been designated as having an Asperger Syndrome focus, and which may be referred to as an enhanced resource. Such schools might be a generic

special or mainstream school and the school's usual catchments area might be widened for learners with Asperger Syndrome, which means that the school might not be the learner's local school. According to Hesmondhalg and Breakey (2001), learners with Asperger Syndrome might be in classes throughout the school, with a designated room as a base or, according to Parker (2000:62-70), they might be taught within a specific class for some or all of their time. The case study of this research will focus on a specialist centre for learners with Asperger Syndrome attached to a mainstream secondary school in Wales.

According to a booklet published by the National Autistic Society (2000), it is possible to ascertain the approximate number of places that authorities provide or fund in the United Kingdom, which are specific for learners with Asperger Syndrome. This booklet was last revised in 2000 and a new edition will be published mid-2005. Information from this booklet is provided by education authorities and the schools themselves. The data focus largely on schools and units/centres which have been set up specifically for learners with Asperger Syndrome or which are recognised by the education authority as having experience and expertise in Asperger Syndrome. It does not include all mainstream and special schools.

2.3.6 Meeting the needs of learners with Asperger Syndrome within mainstream schools

National policy in the United Kingdom and South Africa is to include learners with special educational needs in mainstream schools, wherever possible. Both have acknowledged that there are greater numbers of able learners with Asperger Syndrome than once thought. At present, many learners with Asperger Syndrome in the United Kingdom attend mainstream school full-time. Christie and Fidler (2001:35-44) note that staff within some special schools and units provide opportunities for learners with Asperger Syndrome to spend time with normally developing learners, either by reverse integration or by part-time placement at a mainstream school.

The National Autistic Society (2002) has expressed its concern about the current situation, stressing that there are significant training implications for staff in mainstream schools, many of whom have had little training in special educational needs and Asperger Syndrome.

2.4 THE MOVEMENT TOWARDS INCLUSIVE EDUCATION

2.4.1 What is understood by inclusive education?

The National Autistic Society (2000:6) in the United Kingdom describes Autism and Asperger Syndrome as 'hidden' disabilities - people with them are not easily recognised and therefore do not attract the same attention from society as more obvious physical disabilities. The National Autistic Society (2000:7) contends that, because awareness of autism amongst most of the population in the United Kingdom is very low and the nature of the disability often extremely complex, 'inclusion' is harder to achieve as it requires adjustments from others, if people with autism and Asperger Syndrome are to be able to participate fully in society.

Peacock, Forrest and Mills (1996:9-14) identified the difficulties faced by learners and their families as a consequence of poor planning and co-ordination by local authorities and of inadequate support for learners with Asperger Syndrome in the mainstream. Even at that point, the provision in many schools had improved. Parental satisfaction was increasing, but not for all age groups or for all types of provision. A parent with a low-functioning (Classic Autism) adult living in a therapeutic community (Peacock, Forrest & Mills, 1996:9-14) said:

Inclusion is not about everyone being the same but about having the choice to live where they feel most comfortable and having the opportunity to 'join in' with what they want to - and not what someone else thinks they ought to.

There should be an awareness by policy makers that inclusion should be about choice. Residential communities can be used to help create opportunities in the local community and should not be seen as 'excluding' people from 'the' community. Our son has far more access to the community through the activities and support provided by his residential community than ever he would if stuck in a house in a street relying totally on someone/carer being available to take him out.

According to Peacock, Forrest and Mills (1996:9-14), the policy of inclusion must ensure that appropriate learning or other positive experiences take place. It is not simply about where an individual is educated or receives services or support; it is about the quality of such a service or support. Inclusive education is a process involving the restructuring of the curriculum and classroom organisation. This distinguishes it from integration, which focuses on the placement of an individual or group, and that individual or group having to adapt to what the school is able to offer.

The National Autistic Society (2000:6-7) argues strongly that inclusion should never replace sensitive, individual planning. This is particularly so in the case of a complex but relatively small number of individuals. Autism is a spectrum condition requiring a range of individual and often highly sophisticated responses. The majority of these will hopefully occur within the mainstream or specialist provision, for all or most of the time. There are, however, those individuals whose interests will be best served by discrete specialised services to provide the most appropriate and meaningful education and lifelong support.

2.4.2 Provision by mainstream schools for inclusive education

A survey was held by the National Autistic Society in the United Kingdom (2000:5-27) in order to establish the broad nature of inclusion in British society and the broad concept of social inclusion for learners with Asperger Syndrome. A questionnaire was sent to 2 409 National Autistic Society members across the United Kingdom. Over 1 100 were returned and analysed. The following section will deal with the findings of this survey.

Experience of education

Roughly half the respondents to the survey were in a mainstream environment and half in specialist provision away from the mainstream. A positive picture begins to emerge for early years of provision, which declines through the later school years.

Overall 73% of parents are satisfied with the education their child was receiving (35% very satisfied, 38% quite satisfied). Where autism-specific support was provided - whether in autism-specific units/centres attached to mainstream schools or special schools, or autism-specific schools, the parents' satisfaction levels were at their highest. Those with a child in autism-specific provision were twice as likely to be 'very satisfied' (54%-70%) than those whose child was in a mainstream setting with little or no provision for autism (23%-41%). Only 12% of parents with children in an unsupported mainstream school, however, were very satisfied. The researchers conclude that staff training and expertise in autism is a key factor in meeting the needs of each individual child with autism or Asperger Syndrome. They also highlight the need for each child to have access to appropriate levels of support. An important factor in some instances is the type of school because a particular child may require a very specific setting.

In an interview with the National Autistic Society in the United Kingdom (2000), a parent with a high-functioning child (Asperger Syndrome) in an autism-specific centre attached to a mainstream school suggests the importance of professionalism. She said that the educators and support staff in her son's specialist autism centre were highly trained professionals and truly experienced in autism and its management. As a parent she continually learnt from the mentors at her school and found it wonderful to have professionals who understood her son. She also mentioned that the classroom set-up and approaches used were appropriate and that the staff: learner ratio was very good. The centre had excellent structured and developed social and independence skills. All learners were treated as individuals and had their own individual education plan.

According to the survey, parents are not happier with generic special schools (without autism-specific provision) than they are with mainstream provision with some learning support. Learners with autism and Asperger Syndrome have uneven abilities and it may not be appropriate for them to be in a setting for learners with learning disabilities, where it is assumed that abilities are equal across a range of subjects.

According to the survey, parents need more choice - very few schools have staff who are adequately trained and can provide the right level of support for learners with autism and Asperger Syndrome, and autism-specific provision is very limited. Some young learners have to travel long distances for specialist provision. This can be avoided, if learners can attend their local mainstream school. A parent with a low-functioning child in a mainstream school with no specialist provision for autism had an interview with the National Autistic Society (2000) and said that they were in dispute with the school about its appropriateness for their son. They mentioned in the interview that the educators in this school believed that their son should be moved to a school for learners with severe learning disabilities. As parents they felt that the school was not doing enough and was not taking into account his abilities to function well in a mainstream society. They feel there is a lack of awareness and commitment to their son's needs and a prejudice against non-verbal learners.

The National Autistic Society (2000:6-8) argues that choice may mean greater co-operation and collaboration between mainstream providers and specialist autism providers. For some learners a specialist environment in a mainstream school is still the best to promote their inclusion. Equality of opportunity means flexibility in rules,

routines and curriculum - not that all learners get the same. A range of provision is needed, if individual needs are to be met.

A parent of a medium-functioning learner in a special needs school told the National Autistic Society (2000:6-8) that they would like their son to have more opportunities to mix with 'normal' learners through closer links with the mainstream school. They had been told by the local education authority (LEA) that this was an aim, but it had not yet been implemented.

The survey revealed that satisfaction is higher among parents of pre-school and primary school learners, which indicates that nurseries and primary schools are responding quite well to the needs of learners with Asperger Syndrome. What parents valued most was the recognition of their child's individual needs; they were happiest when schools recognised and met those needs.

Secondary schools and further education are less able to meet the needs of learners with Asperger Syndrome. Parental satisfaction levels were much lower. For instance, one parent of a high-functioning child in a secondary mainstream school with some support said in an interview with the National Autistic Society (2000:8-10) that her son had been put in the 'lowest' class because he had Asperger Syndrome. This had been done without assessing his ability. There seemed to be a tendency for the mainstream schools to see these learners as 'slow' and incapable rather than as individuals with specific different needs.

According to the survey (2000:8), parents' perceptions are that the Local Education Authorities are driven by considerations of cost and resources, not by the needs of the learners. Parents who struggled to get the provision they believe is right for their child (64%) said that they had only achieved satisfactory provision by fighting hard for it.

The survey also revealed (2000:8-9) that one in five learners with Asperger Syndrome were excluded from school at some point, quite frequently because of a lack of staff with experience in Asperger Syndrome. In cases where schools are unable to cope with a learner's behaviour, parents are asked to remove the learner. Learners at the more able end of the autism spectrum have more problems. Their behaviour can often be more challenging to educators and they are more likely to be excluded from school.

According to the Ministry of Education in the United Kingdom (2002), 84% of learners with Asperger Syndrome have a Statement of Special Educational Need or a Record of Need (diagnosis of Asperger Syndrome). And almost half those without are in the process of assessment for a diagnosis. However, 31% of those at the higher end of the autism spectrum fail to receive the necessary support they need to achieve in a mainstream education system.

The National Autistic Society (2000:9) considers that social skills training is often neglected by schools; greater weight is placed on academic achievement. This leads to learners being excluded and often bullied at school. The National Autistic Society (2000:10) argues that positive inclusion policies need to encourage friendship and support among peers; schools should work proactively to encourage social integration, not just adopt measures such as 'anti-bullying' policies. Basic life skills are an important part of the development of any learner - but even more so for learners with Asperger Syndrome. Inclusion will fail to be successful, if schools operate a policy based on academic achievement above providing appropriate social development for children with Asperger Syndrome. The preparation for an adult life - which is likely to be tougher than for the average learner - is very important. Undertaking 'normal' tasks later in life such as shopping, managing to live independently, or - for those higher up the spectrum - commuting to a job or dealing with change at work can create many challenges and difficulties. According to a survey done by the National Autistic Society in the United Kingdom (2000:10), parents are not satisfied with the level of life and social skills training their children are receiving and want their children to be included into mainstream life.

If inclusion is not just an empty slogan, it will require an effort. People with Asperger Syndrome have strengths and can make useful contributions to society. However, they also have special needs that require adjustments from those around them. According to Manset and Semmel (1997:155), such individuals may function in the mainstream, but only with careful attention to their needs. Some may be easily distracted, have poor concentration, be anxious or confused, suffer 'overload' of information or sensory stimulation, or be unable to interpret subtle academic or social rules. It is here that environmental modification and training of professionals are prerequisites for success.

According to Manset and Semmel (1997:158), schools need to buy into inclusion totally if it is to work. Inclusion cannot rely on the interest, commitment and

enthusiasm of one or two individuals. Without a shift in the whole organisation's attitude and approach, it will fail individuals with Asperger Syndrome - as witnessed by many schools' inability to cope when key staff are unavailable and the resultant exclusion of some learners. Maset and Semmel (1997:165) state that there are also more difficulties at secondary schools because of the greater peer pressure to conform. A study by Whitaker (1994) showed that a third of secondary school learners were concerned about ridicule or rejection by peers, if they maintained contact with learners with disabilities.

According to Ainscow (1999:5), the general National Curriculum does not adequately reflect the broader educational needs of learners with Asperger Syndrome and often fails them and, in particular, the older learners. If it is to work, then it needs to be adapted imaginatively to meet the differing learning needs of these learners. Evidence from a number of academics, including Sebba and Sachdev (1997), Flack (1996), and Myles and Simpson (1998) shows that adapting the curriculum for the needs of the individual learners can provide a more stimulating curriculum for all learners. Ainscow (1999:1-19) contends that equal emphasis needs to be given to social skills and life skills, especially for those who stand to benefit most from this input.

According to Ainscow (1999:7), whatever the provision or situation for a child or adult with Asperger Syndrome, it is essential that their individual needs are met. It is vital that all people who come into contact with these children and adults should acknowledge their autism and recognise the impact it has on their lives and their ability to learn and to live within our society. Training and expertise for educators and health professionals is essential.

According to Parsons (1999:15), inclusion should never replace sensitive individual planning, particularly in the case of a relatively small number of complex individuals who, without very skilled support, are a source of severe disruption to their families, schools or other placements, or who simply go on to lead unhappy, unfulfilled and vulnerable lives. This group will include the most severely disabled, but will also apply to those of good academic potential but with severe social impairments. Parsons (1999:18) argues that the positive lead established by pre-school and primary educators shows that it is possible to obtain inclusive environments. As learners grow older, so their environments become more complex. Nevertheless, the adjustments needed to make life more manageable for people with Asperger

Syndrome and to enable their inclusion are not onerous. Parsons (1999:1-23) mentions that there are simple steps to take, for example, being clear in the use of language, providing structure and avoiding uncertainty.

According to the National Autistic Society in the United Kingdom (2000), educators can promote such a sympathetic environment by positive policies such as 'buddy' or mentoring schemes, 'circle of friends' or peer tutoring. Employers can also tap into the strengths of people with Asperger Syndrome via the use of support workers, such as those provided by the National Autistic Society supported employment service, Prospects, and by ensuring that staff are made aware of the specific needs of their fellow workers

Recommendations

The National Autistic Society in the United Kingdom made the following recommendations in their national survey on autism and Inclusion (2000):

1. Autism awareness should be part of continuing professional development for a range of professionals in health, social services, education and employment.
2. Earlier diagnosis, identification and intervention would give all people with autism a better chance in life. This should include:
 - In education: initial teacher training, or special needs co-ordinators and practising teachers in the identification of Asperger Syndrome at primary school age;
 - In health: the development of a national diagnostic consensus, to disseminate best practice, and to encourage the use of universal diagnostic labels.
3. Local education authorities should develop and make available autism-specific expertise for mainstream schools, whilst maintaining choice of autism-specific schools. This could take the form of autism-specialist teachers as part of a local education authority's central teaching support service and specialist centres for learners with Asperger Syndrome.
4. Positive policies in schools should be promoted to encourage the social integration and inclusion of learners with Asperger Syndrome; there are a host of practical initiatives which have been successful and which require wider dissemination. These include: how to build on strengths and self-esteem;

classroom organisation; pictorial or visual timetables; work organisational structuring or teaching and leisure; friendship support networks; prevention of teasing and bullying; planned transitions; learners and staff preparation; phases of positive implementation of new experiences, and so on.

5. The educational needs of those at the more able end of the autism spectrum should be addressed and access to diagnosis should be improved.
6. Social and life skills training and social time support should be provided, e.g. breaks and lunchtimes, for learners with Asperger Syndrome in schools to stand them in good stead when they leave educational provision. There should also be greater emphasis on disability discrimination in personal health and social education citizenship curricula for all learners in order to address issues such as bullying.
7. Staff in secondary and further educational provision should be trained to respond more appropriately to the educational needs of learners with Asperger Syndrome. For example, the number of changes the learners I experience should be reduced and communication and organisation issues should be responded to consistently, ensuring that the learner's level of comprehension and functioning are taken into account.
8. There should be a positive incentive for schools to include learners with special needs by building the index of inclusion developed by universities and government policies into local education authority, and/or government performance indicator frameworks.
9. Central government should advocate the business case for employing and serving people with Asperger Syndrome, and encourage employers to make 'reasonable adjustments' so that this group can work, if they want to. Employment services for people with Asperger Syndrome, such as the National Autistic Society's Prospects scheme, should be established in all major cities to match employers with potential employees.
10. Transition planning has rightly been afforded a high priority within learner's services plans. The importance of this process should be restated, as not all authorities respond adequately and those learners who do not have a diagnosis of Asperger Syndrome may be overlooked completely. Transition planning is a

dynamic process, which must begin early to ensure adequate preparation and appropriate provision for school leavers.

11. Further and higher education institutions should be encouraged to recognise the social needs of learners with Asperger Syndrome who may form part of their learner populations.
12. Care standards should be specific in supporting the needs of people with Asperger Syndrome.
13. Discussion with employers should be held to achieve a better understanding of the needs of people at the more able end of the autism spectrum and push for more 'reasonable adjustments' to be made in the workplace so that people with Asperger Syndrome can be employed.
14. Social services, health and education agencies should take into account the lifelong learning needs of adults when designing their care packages so that education and training continues beyond school and learner age.
15. Further and higher education funding bodies should recognise that people with Asperger Syndrome often achieve educational milestones at a different pace from their peers and have lifelong educational and training needs, so that funding should not be time limited.
16. Above all, it should be recognised that meeting individual needs should be fundamental when providing any service, support or education to people with Asperger Syndrome. Their rights as individuals must be recognised.

2.5 EDUCATIONAL INTERVENTIONS

Many different educational interventions have been devised for learners with Asperger Syndrome or adapted from interventions originally designed for a broader population. With a growing understanding of Asperger Syndrome, a consensus is developing on the types of intervention that are most likely to be effective. According to Jones (2002:47), given the range of needs within the spectrum, it is not likely that a single intervention will meet all the needs of an individual or that a particular approach will be appropriate for all learners. There are many educational interventions for learners with Asperger Syndrome. Some have been developed in the United Kingdom and others started in other countries, mainly in the United States

of America. Information on particular interventions varies a great deal and extracting relevant information on which to base decisions can be difficult and time consuming.

This section of the research will focus on interventions that have already been mentioned (well-known interventions), but this is not to suggest that these are preferable to other methods, which staff and parents have devised themselves, which often have no name and have not been publicised. The interventions included here are currently used within the United Kingdom. It is valuable to explore the principles, which underpin these interventions and how they are operationalised in practice. There are inevitably limitations, as well as potential strengths, for all interventions, and these will vary in relation to individual learners.

Educational interventions with learners with Asperger Syndrome in the United Kingdom

Some of the interventions currently used in the United Kingdom are given in Diagram 2.5 in alphabetical order. It is rare in the United Kingdom for a school to adopt and follow just one approach or intervention. It is possible for a school to be using parts or the whole of a number of interventions. According to Jones (1999:101-110), it can be difficult for parents and professionals to gain information on those used within a particular school. Documents may exist on some interventions, but these are rarely collated in an easily accessible form to give an overview of a school's work and, furthermore, schools change over time. Jones (1999:101-110) makes the point that documents which describe the rationale and practice of the school or unit would be very helpful. These could include sections on the theories and research, which underlie the practice, a section on the approach and style taken by adults working in the school, and a section on what they prioritise for the learners. In addition, providing evidence on the progress of learners who already attend the school would be very useful.

Diagram 2.5: Interventions currently used in the United Kingdom

Circle of Friends (Taylor, 1997; Whitaker *et al.*, 1998)
Daily Life Therapy (Quill *et al.*, 1989)
Intensive Interaction (Hewett and Nind, 1998)
Lovaas Programmes (Lovaas, 1987)
Makaton Signing and Symbols (Walker, 1980)
Musical Interaction Therapy (Christie *et al.*, 1992; Prevezer, 2000)
Option or Son Rise Programme (Kaufman, 1976; 1994)
PECS (Picture exchange communication system) (Bondy and Frost, 1994)
Social Stories (Gray, 1994a; Rowe, 1999)
TEACCH (Treatment and Education of Autism and Communication-Handicapped Children) (Schopler and Mesibov, 1995)

(Jones, 2002)

Many of the interventions mentioned above can be used with children in the mainstream educational system, and not just learners on the Autism Spectrum. Many of these interventions are used in mainstream schools in the United Kingdom to provide support in including learners with Aspergers Syndrome.

According to Jordan (1998:77), when parents and teachers are told that a learner has Asperger Syndrome, they often ask what can be done to help. They may assume that there is a relatively straightforward answer. Some have thought that government departments for education would have a blueprint for learners with Asperger Syndrome. But, as in many areas of education, so too in Asperger Syndrome, there is relatively little research evidence to base educational practice on. According to Prizant and Rublin (1999:199-208), a chief education officer points out that there is no firm evidence base for many educational initiatives, including the National Curriculum. He therefore maintains that all those employed in education should reflect on their practice and be engaged in research activity. The Department of Education and Employment in the United Kingdom commissioned a centre whose task it is to collect and collate existing evidence in education to guide policy and practice in the future. It is known as the EPPI Centre (Evidence for Policy and Practice In education).

One of the reasons, according to Prizant and Rublin (1999:199-208), that little research has been done is that measuring outcomes and establishing the reasons for progress are not straightforward processes. Given the heterogeneity of the Autism Spectrum Disorder population and the relatively small numbers of learners engaged in particular interventions, conducting research studies and gaining conclusive evidence is not easy. Although research evidence is important, it is only one source of information that a teacher or parent might use to decide on how to work with a learner. Knowledge of the particular learners and their response to previous approaches, ideas from current theories, previous experience with other learners and current social and cultural values, can all parents or teachers to make appropriate decisions.

Making a decision on which interventions to follow

With the literature suggesting that the earlier the intervention the better, parents may feel great pressure to find the right approach quickly, which can lead to anxiety, distress and disappointment, and affect their subsequent relationships with professionals they meet. Parents and teaching staff need to make informed decisions on what they choose to do. A possible framework of questions is given in Diagram 2.6.

According to Jones (2002), the founders and practitioners engaged in interventions rarely have answers to all these questions, and some can only be answered in relation to a particular learner, the family and the social context. Staff and parents may engage in an intervention without satisfactory results, perhaps because they have been attracted by just one or two aspects of the approach. Greater evidence needs to be generated, so that proponents of these interventions invest more time in providing data and written information on these issues.

Diagram 2.6: Framework of questions to explore interventions for a particular learner with Asperger Syndrome

- What is the rationale of the intervention and how does this fit with current understandings of Asperger Syndrome?
- To what extent does the intervention address the needs of the learner in the areas of communication, social understanding and flexibility of behaviour?
- What do the adults and learner do in the intervention and how is the learner likely to respond to this?
- What does the intervention expect to achieve in terms of outcome for the learner, both in the short and the long term?
- What evidence is there to suggest these outcomes are achieved?
- For which learner with Asperger Syndrome is the intervention most appropriate?
- What are the financial and emotional costs and the training implications for the family and the staff?
- Does the intervention match the personal style of the parents or teaching staff?
- Is it ethical or potentially harmful to the learner and the family?
- To what extent are the skills and understandings taught useful in a school and family context and is support given to generalise skills?
- Is it essential for parents to be involved and can alternative arrangements be made if this is not possible?

(Jones, 2002)

According to Jones (2002), interventions offered to parents should not greatly alter their parenting style, but evolve from it. Parents can be encouraged to identify aspects of their interactions which are beneficial and develop these, whilst replacing aspects which are less successful. The same applies to staff. Decisions need to be made on whether all staff should be trained in an intervention or whether only certain staff should be selected and on what basis. It is also important to ask what the intervention would replace in terms of time and resources, how easy it is to access, whether the same results could be obtained in a less costly manner, and whether the outcomes are worth the emotional and financial cost for the learner, the family and the school. The intervention chosen should be evaluated from the start, to determine its impact on the learner and others. On the basis of the data collected, informed decisions can be made as to whether the intervention should continue.

Research evidence on educational interventions for children with Asperger Syndrome

A review of the research evidence on educational interventions for Asperger Syndrome was commissioned by the Department for Education and Employment in the United Kingdom in 1998. This review revealed that studies were often limited to those conducted by the proponents of the intervention and the majority did not include a comparison or control group (Jordan *et al.*, 1998). The studies were therefore open to bias and it was often not possible to know whether similar outcomes or better would have been achieved using a different approach. Freeman (1997:479–82) and Prizant and Rubin (1999:199-208) note that other reviews of research into interventions have also concluded that studies suffer from shortcomings in relating to experimental design, subject selection, outcome measures, how faithfully the intervention was implemented and the interpretation of results. One of the reasons according to Prizant and Rubin (1999:199-208), that more systematic, evaluative work has not been done is that measuring progress and outcomes in Asperger Syndrome is not straightforward. The main areas of difficulty are given in Diagram 2.7. Some of these are common difficulties when researching learners with special educational needs, but others are particularly problematic in the field of Asperger Syndrome. In addition, it is only relatively recently that diagnostic instruments have been developed with good levels of validity and reliability, so that confidence in the populations included in past research studies has not been high.

According to Lord (2000:205), in all studies which set out to measure the effects of an approach or placement there are a variety of factors, in addition to the approach, which might affect rate of progress. These include the learner's intellectual ability, the severity of Asperger Syndrome and the length of time the learner has spent in the approach. Lord (2000:205) makes the useful point that obtaining a large sample would lessen the effects of some of these, but if a particular intervention is being studied, the numbers of learners with Asperger Syndrome in a geographical area is limited. Research involving a number of centres is required or data collection over a considerable time to recruit sufficient numbers. Although research is not straightforward, it is only by engaging in research that methods will be enhanced and improved, so that decisions made can have a stronger evidence base.

Diagram 2.6: Factors, which create difficulties in conducting research on learners with Asperger Syndrome

- The heterogeneity of the population.
- The lack of appropriate standardised measures
- The difficulties in testing children with Asperger Syndrome
- The problem of therapist drift, as discussed by Jordan and Powell (1996), where the practice of practitioners or parents may alter to suit their personal style
- Professionals and parents may try more than one approach simultaneously and move in and out of approaches
- The knowledge and competence of practitioners can vary
- There may be changes in the personnel involved
- The nature of the approach itself may change over time as practice develops
- Obtaining a sample which stays within a particular research category (e.g. approach/school type/geographical area)

(Prizant & Rubin, 1999:199-208)

Interventions/support used in schools in Wales

In this section details of the best known or commonly used interventions in Wales are provided. They are classified in terms of whether they focus on many areas of development or on a particular area. According to Ivar Lovass (2004), some interventions such as Lovass or PECS begin at the preschool stage and may be home-based initially. They may then transfer into school. Other interventions such as DLT, TEACCH, Circle of Friends or musical interaction are largely school-based in Wales. These may be shared, in part or whole, with parents, and then used at home too. Two of the interventions, Child's Talk and EarlyBurd are parent-training programmes, which aim to develop the child's skills by advising parents on how to develop communication and play (Jones, G., 2002)

To enable the reader to identify the potential advantages of each approach dealt with below and raise possible questions for research, the potential strengths of each approach are listed and questions are posed which need to be explored, in addition to those given in the framework in Diagram 1.6. These questions do not only relate to the interventions described, but could be asked generally of practice within schools and units/centres. Teaching staff could take each question and reflect on their own practice in relation to teaching learners with Asperger Syndrome. In the next section I will discuss the common features of successful interventions.

A developing consensus: common features of successful interventions

According to Harris and Handleman (1994), Bristol *et al.* (1996:121-54), Rutter (1996:257-75), Dawson and Osterling (1999), Freemant (1997:641-52), Connor (1998:109-17), Howlin (1998b), Jordan and Jones (1999b:101-10), and Prizant and Rubin (1999:199-208), there have been a number of reviews of interventions that indicate a growing consensus on the features of interventions which are thought to be effective (see Diagram 2.8). In addition, the insights provided by adults with Asperger Syndrome are extremely useful.

Diagram 2.8: Features common to interventions which are thought to be successful for Asperger Syndrome

- Intervene early
- Involve parents
- Create an environment where it is clear what the learner has to do and which is sensitive to the learners' sensory difficulties
- Develop joint attention and communication skills
- Allow sufficient time for information processing
- Gain information on the learner's view of what is offered
- Use the learner's special interests and skills and include activities s/he enjoys
- Include normally developing learners in play and work
- Acknowledge differences between learners with Asperger Syndrome
- Have a functional approach to managing behaviour
- Support transitions within and across schools
- Take a long-term perspective
- Provide regular physical exercise
- Give training in relaxation

(Bristol *et al.*, 1996:121-54; Connor, 1998:109-17; Dawson & Osterling 1999; Freemant, 1997:641-52; Harris & Handleman, 1994; Howlin, 1998b; Jordan & Jones, 1999b:101-10; Prizant & Rubin, 1999:199-208; Rutter, 1996:257-75)

According to these reviews of interventions, staff needs to have knowledge of these key features and should understand why they are important. According to Lubbock (2001:11-109), some staff and parents receive adequate training, but other staff and parents do not, and are expected to learn from watching others or from relatively short training sessions. These individuals are not in a good position to modify their approach when the learners fail to make progress. Lack of progress or problem

behaviour may then be incorrectly attributed to the nature of the learner's difficulties rather than to inappropriate teaching.

2.6 PERSPECTIVES ON THE EDUCATION OF LEARNERS WITH ASPERGER SYNDROME

2.6.1 An international perspective on patterns of placement of learners with Asperger Syndrome

Understanding the context of policy development in Asperger Syndrome education in other countries is a complex matter. As Phillips (1989:269) writes:

It is of course clear ... that comparative research in education should take into account the historical, political, social and cultural setting of particular systems and aspects of them. It is only through analysis and understanding of the roots that feed education systems that we can arrive at a proper understanding of why things are as they are ... Outcomes themselves should not be seen in isolation from the processes that have produced them.

In this study I explore the views of some countries, such as the United Kingdom, United States of America and Australia, on inclusion for learners with Asperger Syndrome. I have chose some key countries with developing policies on inclusion and learners with Asperger Syndrome. There are obviously many more countries with policies on inclusion, but I found in my research that the mentioned countries have definite policies or are in the process of developing policies for including children with Asperger Syndrome into mainstream education. Firstly, I looked at inclusion in the United States of America.

2.6.2 United States of America

The development towards inclusive education in the United States of America

Moore (1992:23), commenting on the placement patterns of disabled persons in the United States of America at the time, noticed how the theme of segregation and isolation evident in the broader society at the time was reflected in the segregation of disabled learners in education. Unlike attempts at integration in Europe, the United States of America maintained the segregated education system for disabled learners well into the nineteenth century. It was the deaf community that started the first uproar in the United States of America, when Alexander Graham Bell insisted that learners with special needs should be permitted to attend mainstream education. The existing residential schools could not accommodate the increased numbers of

learners with special needs. These learners were accommodated in day-school programmes in units close to their homes. At about the same time some educators questioned the efficacy of residential or special class placement and the term *mainstreaming* became popular. Several landmark court cases challenged the "separate but equal" approach to education. The decision by the Supreme Court of the United States in 1954 in the *Brown v. Board of Education* case that "this concept and policy were found to be unconstitutional" is seen as the first step in dismantling the ideology of segregation in the education in the United States of America. The *Mills v. Board of Education of the District of Columbia* (1972) and *Pennsylvania Association for Retarded Citizens v. Commonwealth of Pennsylvania* (1972) were two further cases where it was ruled that it was illegal to exclude individuals with disabilities from free public education. In both cases mainstream classroom placement was seen to be preferable to special class placement, which in turn was preferable to placement in residential schools or institutions (Smith 1998:29-94). According to Moores (1992:23), the foundation seemed to be set for a revision of the laws governing education in the United States of America with obvious implications for the education of learners who have special needs. In 1975 US Public Law (94-142) (142nd public law passed by the 94th Congress), the Education for All Handicapped Children Act was passed. This law enabled access to thousands of learners who were previously denied access because of physical, sensory or learning disabilities. Moores (1992:23) adds that appropriate public school education in the least restrictive environment was interpreted as placement not being restricted to one setting, but to a range of possible alternatives, including instruction in mainstream classrooms, resource rooms, self-contained classes and special schools and institutions. The law was amended in 1986 to mandate free appropriate education for learners aged three to five with disabilities. In 1990 the law (94-142) was further amended. Some of the modifications included the change of the name of the law to the *Individuals with Disabilities Education Act* (IDEA). The IDEA was explicit in its call for including learners with disabilities in regular school programmes. It emphasised that learners with disabilities should be educated in settings where they would have been placed if they did not have the disability and underplayed the desire to have such learners educated in segregated settings (Smith, 1998:29-94). The implications of the change in education policy for learners with special needs were that a range of placement options became available. These were residential schools, day schools, classes in ordinary schools, resource rooms and placement in

the mainstream classroom with support from a specialised educator. In the 1990s the inclusive movement gained momentum. Smith reported that by 1992-1993 almost 50% of learners with special needs were being catered for in mainstream classes.

Current development towards a better life for learners with Asperger Syndrome in the United States of America

According to Gross (2003:1-5), the skyrocketing number of diagnoses of the perplexing brain disorder autism in learners led federal officials for the first time to map out a long-term, interagency plan to deal with the problem. Gross (2003:1-5) explains that the plan includes objectives such as the development of teaching methods that will allow 90% of learners with Autism Spectrum Disorders to speak; the identification of genetic and non-genetic causes of the condition; and adequate services for all afflicted learners in the next seven to ten years. The three-pronged plan sets goals for more coordinated biomedical research, earlier screening and diagnosis, and effective therapy. The plan demands, for the first time, collaboration between scientists, clinicians, educators and policymakers in an array of federal agencies.

Some are delighted rather than daunted. Robert L. Beck, president of the Autism Society of America, the nation's oldest and largest autism advocacy group puts it this way: "Millions of people need help. And this is a new opportunity and a very exciting one" (in Gross, 2003:114).

The need, however, is enormous. According to federal education officials, in 1992-93 fewer than 20,000 of the nation's nearly five million special-education learners, ages 6 to 21, were considered as having Autism Spectrum Disorders. Ten years later nearly 120,000 out of six million special-education learners were diagnosed as having Autism Spectrum disorders. That does not take into account the 19 000 learners, aged 3 to 5, receiving autism services under federal law, or those younger whose numbers have not been tallied.

Nobody knows the cause of the surge, although epidemiologists suspect it is largely a result of refined diagnosis and public awareness. That does not change the dimensions of a problem that strains schools, medical services and families. Nor does it affect forecasts of growing caseloads for decades to come.

Dr Fred R. Volkmar (2000) of the Child Study Centre at Yale University, a leading autism researchers and a member of the committee that drafted the 10-year plan, measures the crisis in more anecdotal ways. In an interview with Gross (2003), Dr Volkmar comments that twenty years ago, when he told people he worked with learners who have 'Autistic' Spectrum Disorders, they often misheard him and thought he had said "artistic." They had never heard of the disorder, which typically affects the ability to communicate, form relationships with others and respond appropriately to the external world. By contrast, Dr Volkmar says, it is rare these days not to know someone with a child on the Autism spectrum. He now sees children as young as twelve months, gets referrals from day-care centres and has a two-year waiting list.

According to Gross (2003), the plan reviewed by the Interagency Autism Coordinating Council, established by the Child Health Act of 2000, has been presented in broad brushstrokes, with few details and no price tags. It was drafted by scientists to assess the state of autism research and identify the obstacles that might be hindering progress in understanding the cause and the best treatment options. The plan lays out a timeline, in increments of one to three years, four to six years, and seven to ten years and then ranks goals according to the likelihood of achieving them. Realistic goals in each of the three stages include the development, evaluation and institution of effective treatments, in collaboration with the Department of Education. Gross (2003) contends that more challenging goals, by contrast, include finding effective drugs for the symptoms of autism and identifying environmental factors that may contribute to the development of the disorder.

According to Foote (2002:1-20), the idea is to be challenging everyone in the field to be reaching for the best that can possibly be done. The legislation, passed in the Clinton administration, addresses dozens of childhood disabilities. According to Foote (2002:1-20), some parents are likely to be frustrated by the plan's suggestion that it will take at least seven years to provide treatment for all who need it.

In an interview with Mr Beck of the Autism Society of America, Gross (2003) noted that he hoped the long-term research and improved services were not mutually exclusive. He went on to explain that good practices do exist, but there are just not enough of them. Furthermore, there is just not enough money for the services and treatment, and that this is affecting learners between 7 and 10 years of age.

According to Gross (2003:114), education officials deny a lack of interest. Robert Pasternack, assistant secretary for special education, said that President Bush had been generous in his provision of financing for educational services for the disabled. Mr Pasternack did, however, acknowledge a "critical shortage of special education teachers" and said the government was eager to "help states recruit and train them."

2.6.3 Australia

According to Power (1994:422), Australia and New Zealand are keeping up with trends in the rest of the Western world. They started education provision for learners who have special educational needs in separate schools. With the move towards the decentralisation of education provision in a number of states in the 1950s and 1960s, a number of special needs units/centres were established on the premises of primary and to a lesser degree in secondary schools. The units/centres functioned separately as "mini schools for special needs learners" Power (1994:422), whose main rationale was having the learners educated in a setting as close to home as possible and not necessarily integration or mainstreaming. "Levels of integration were left to the discretion of the educators and often it was not more than it would have been had the learners been in a separate special school" (Power 1994:422). From the 1950s to the 1970s the state of Victoria implemented integration of learners with mild to moderate learning difficulties individually into mainstream classes and supported by visiting teacher services. The frequency of visits varied, as did the role of the educators. The needs of learners with special educational needs were determined by a central expert body, who recommended placement in state schools. Parents often had little say in the placement of their children. The development in special education did, however, result in the closure of the big state schools for special learning difficulties, the decentralisation of programmes into suburban or small town units/centres and/or the changing of schools for special needs education to mainly units/centres in regular primary and high schools.

According to Power (1992:427), the education department of Australia recently brought out the following information to help support their move to inclusive specialised education.

Education Support Facilities and Options: The Education Department established a range of facilities and options to meet the educational needs of learners with disabilities. A District Placement Committee coordinates all requests for placement to

local education support facilities and options. Education support facilities and options include:

- **Satellite Classes:** These classes are linked to an Education Support School or an Education Support Centre located in a regular school. They provide opportunities for social integration and individualised educational instruction for learners with an intellectual disability. Therapy, medical and support services for satellite classes are coordinated by personnel from the linked Education Support School or Centre.
- **Education Support Units:** These classes are within regular schools, which provide education for learners with mild to moderate intellectual disabilities. In country areas, units cater for the full range of learners with intellectual disabilities. Units/centres are established according to district needs and reviewed on a regular basis. The learner numbers in an education support unit/centre will vary.
- **Inclusion Programme:** The Inclusion Programme has been developed to enable some learners with an intellectual disability to access supported education in regular school settings. The Centre for Inclusive Schooling has the responsibility for the administration of resources to the programme and for providing support to schools participating in the programme.

2.6.4 A South African perspective

According to Lipsky and Gartner (1999:12), the development of specialised education in South Africa can be linked to developments in specialised education in other parts of the world as well as the philosophies and politics of the time. Historically the vast disparities in services were linked to the philosophy of separatism based on race.

What is the South African perspective of Inclusion?

Lipsky and Gartner (1999:13) state that inclusive education is defined as: providing to all learners, including those with significant disabilities, equitable opportunities to receive effective educational services, with the needed supplemental aids and support services, in age-appropriate classes in their neighbourhood schools, in order to prepare learners for productive lives as full members of society.

The Salamanca Statement and Framework for Action on Special Needs called on all governments to: "adopt as a matter of law or policy the principle of inclusive education, enrolling all learners in regular schools, unless there are compelling reasons for doing otherwise" (UNESCO 1994:ix).

Curriculum 2005 (2002) and Education White Paper 6 on Special Needs Education: Building an Inclusive Education and Training System (2001) emphasise that any practice must be consistent with the following:

- All learners can learn given the necessary support;
- OBE is learner paced and learner based;
- Schools create the conditions for learners to succeed;
- There is a shift from categorising/labelling learners according to disability towards addressing barriers experienced by individual learners;
- Provision should be based on the levels of support needed to address a range of barriers to learning.

Curriculum 2005 (2002) sets the same specific outcomes for all learners. This means that:

- Schools must organise teaching and learning in such a way that all learners can attain these outcomes;
- Any barriers to the learning and development need to be identified and understood so that learning and assessment can be appropriately adapted or modified;
- Here we can talk of creating an enabling and supportive environment through changing of the school ethos, teaching practice and a flexible curriculum. For this no additional resources are needed.

Barriers to learning and development could be:

- Systemic, e.g. lack of basic and appropriate learning support materials, assessment devices, inadequate facilities at schools, overcrowded classrooms, etc.;
- Societal, e.g. severe poverty, late enrolment at school, etc.;

- Rooted in inappropriate pedagogy, insufficient support of educators, inappropriate and unfair assessment procedures, etc.;
- The result of disabilities (neurological, physical, sensory, cognitive etc.) located in the learner.

In terms of Curriculum 2005 (2002), in most cases (if not all) the learning and development of a learner are hampered by a combination of two or more of the above types of barriers. It clearly states that schools should accommodate learners with all learning difficulties as part of their education plan. This includes learners with Asperger Syndrome. It is up to the school and education authority to educate and train staff to be able to accommodate these learners. The aim of the education for learners with Asperger Syndrome should be barrier free, and this is exactly what Curriculum 2005 (2002) is aiming to achieve.

Ultimately, schools and educators are responsible for creating the conditions for learners to succeed. Macro planning in schools should take cognisance of the nature and extent of support learners require. In most cases within the South African context learners who experience barriers to learning are a significant component of the ordinary school population.

According to Curriculum 2005 (2002), there are approximately 64 000 learners in special schools. The estimated number of learners who experience barriers to learning and who are not catered for in ordinary education is in the range of 400 000. This number, however, may not reflect the significant number of learners who repeat grades and drop out of school because their needs are not met.

Support should therefore be seen as integral part of the teaching and learning process in all schools. As assessment can never be seen as separate from this process, it is essential that support measures also focus on this.

It is thus clear that South Africa is aiming to accommodate all learners with special needs, including those with Asperger Syndrome, in their mainstream education. Clear guidelines have been established for schools and departments on how to manage the process of accommodating these learners. Some of these guidelines are given in the Curriculum 2005 document brought out by the government in June 2002. These guidelines in Diagram 1.8 and 1.9 give some indication of the way that a specialist centre can be developed in mainstream schools for learners with specific learning difficulties. It is thus very clear that the foundation has been laid for

specialist centres in South Africa. Now is the time for plans to establish such centres to be refined. In this study some measurement will be given to help build on the foundations in the White Paper and Curriculum 2005 (2002) for inclusive education. Further guidelines will also be given on ways to support learning within South Africa by setting up specialist centres for learners with Asperger Syndrome in the mainstream. Diagram 2.9 shows the credit allocation and the weighting of specific outcomes for learners who experience barriers to learning as explained in the Curriculum 2005.

Diagram 2.9: Credit allocation and the weighting of specific outcomes (SOS)

Credit allocation and the weighting of specific outcomes (SOS)

Credit allocation and weighting of specific outcomes are exactly the same for all learners. The following must however be emphasised regarding learners who experience barriers to learning.

- Learners who experience barriers to learning must also be exposed to all 66 SOs
- A variety of activities should be developed to enable a learner to achieve the core specific outcomes.
- If a learner is not able to manage a particular activity, alternative activities should be designed to give the learner the opportunity to demonstrate competence in that specific outcome.
- A certain activity can be adapted to enable a learner who experiences physical or sensory barriers to demonstrate the outcomes.
- For learners who do not achieve the required percentage of outcomes, possibilities need to be explored to continue along the various pathways available in the FET band.

(Curriculum 2005 Assessment Guidelines for Inclusion Document, June 2002)

When a specialist centre is set up in mainstream schools, the professional staff need to develop and adapt the curriculum to help the learners achieve success in the areas that they have deficits in because of their learning disability. In a centre for learners with Asperger Syndrome, for instance, there could be a greater emphasis on social language and communication to help the learners access the curriculum in the mainstream school.

Diagram 2.10: Alternative or adaptive methods of assessment***Alternative or adaptive methods of assessment***

It has been emphasised above that one of the key principles of outcomes based education and Curriculum 2005 is that all learners can learn albeit at a different pace and along different pathways. To be fair to all learners and consistent with the principles of outcomes based education and curriculum 2005 special arrangements may be needed when it comes to assessment. There are many practical ways in which educators can adapt the way in which activities and assessment are planned, structured and conducted, e.g.

- Learners should be given sufficient time to demonstrate competency in the assessment tasks. Learners can be given more time, not only to write test but also to demonstrate outcomes through all other methods of assessment. Multiple opportunities also need to be provided to improve work and to achieve optimally.
- Learners can have the papers/task instructions read to them and they can dictate their answer to an educator/learner/other person who writes it down to be marked. Learners can also dictate their answers on a cassette. This can assist learners with reading and writing barriers, severe visual barriers and those with physical barriers that affect their hand movements.
- Assessment can include a practical component so that learners can demonstrate their competence without having to use language. This is a more suitable assessment of learner's competence if they have language problems. Remember that OBE acknowledges outcomes in skills, values, and attitudes in addition to knowledge.
- Develop an activity or task to substitute the task being done by the rest of the class, e.g. a learner with physical disability in an Arts and Culture or Life Orientation activity to demonstrate a specific outcome.
- Design activities, which can allow learners to demonstrate a level of competence and to achieve an outcome.
- The purpose of alternative or adaptive methods of assessment is therefore to minimise the impact of a range of intrinsic and extrinsic barriers upon the assessment performance of the learner. The provision of alternative assessment is simply to accommodate the functional differences of some learners. The aim is:
- To achieve the balance between meeting individual needs while maintaining assessment validity - i.e. to address the barrier, not to compensate for it. This is an essential part of providing learning support.
- To allow the results of the assessment to reliably reveal the needs of some learners to be supported in the teaching and learning process. This will assist educators to plan intervention strategies in such a way that all barriers are effectively addressed.

(Curriculum 2005 Assessment Guidelines for Inclusion document, June 2002)

Referring to Diagrams 2.9 and 2.10, it is clear that the assessment methods for learners with Asperger Syndrome in the mainstream would be able to accommodate them. With the help and support from a specialist centre as part of a mainstream school, the government will be able to achieve their vision for Curriculum 2005 and outcomes-based education.

The White Paper 6 on Special Needs Education (2001) provides a framework for the government's long-term goal to achieve an inclusive education and training system.

This process will investigate and address barriers to learning, and recognize and accommodate the diverse range of learning needs. It is part of a twenty-year programme that aims to build an open, lifelong and high-quality education and training system for all citizens, including those with disabilities. Government's short- to medium-term goals will focus on addressing the weaknesses and deficiencies of the current system and on expanding access for learners of compulsory school-going age who are not accommodated within the present education and training system.

The inclusive system envisaged by the South African government includes a range of institutions, from schools and resource centres meeting special needs to designated full-service and other schools; public, adult-learning centres and further and higher education institutions. The White Paper 6 (2001) proposes that schools for learners with special needs will be strengthened rather than abolished. Given the considerable expertise and resources that are invested in special schools, their facilities will be made available to neighbourhood schools, especially full-service schools and colleges. Following the completion of an audit of special schools, plans will be made to develop and improve the quality of education across all of them. Learners with severe disabilities will be accommodated in these special schools, as part of the inclusive system. The process of identifying, assessing and enrolling learners in special schools will be overhauled and replaced by structures that acknowledge the central role played by educators and parents. According to the White Paper 6 (2001), implementation of the policy on inclusive education and training will necessarily involve people with disabilities, organizations of people with disabilities, and parents of disabled learners in:

- The establishment of full-service schools with the necessary resources for inclusive education;
- The transformation of schools to meet special needs into effective resource centres;
- Implementation of policy through support teams at district and institutional levels;
- Building and consolidating of relations with influential bodies like teacher unions and parent bodies to ensure proper functioning of the proposed support teams;

- Development of restructuring models for technical colleges, similar to those for the further education and training sectors;
- Establishing support services in higher education institutions for students with disabilities;
- Mobilising financial support for learners with disabilities at institutions of higher learning;
- Ensuring adults with disabilities also participate in life-long education and training processes;
- Taking advantage of skills development programmes.

The White Paper adds:

Inclusive education aims to address the learning needs of all children, youths and adults, with a specific focus on those who are vulnerable to exclusion. It holds that educational institutions should strive to accommodate all learners regardless of their physical, intellectual, social, emotional, linguistic or other conditions (White Paper 6 on Special Needs Education, 2001).

According to the SAHRC Report (2002), South Africa has one of the most progressive, rights-based constitutions in the world. Yet our citizens with disabilities are confronted daily by barriers that prevent them from fully participating in society. People with disabilities continue to be systematically denied equitable access to their rights. Their situation in life becomes even more difficult due to societal neglect, discriminatory attitudes and barriers in their communities. The legislative review of accessibility and built environments has focused on the physical barriers people with disabilities face in our society. The Commission acknowledges that there is also a need for a full investigation into other discriminatory areas, including communication, information and technology. The government's Integrated National Disability Strategy is a landmark policy document in the struggle to create a just and equitable South African society. It needs to be supported by legislation that guarantees the rights of people with disabilities, covers all aspects of their lives, and opens up equal opportunities for them to realise their social and productive potential as citizens. This report has highlighted the fragmented nature of existing legislation to protect the rights of persons with disabilities. The various and disjointed laws and regulations with codes, standards, sections and guidelines make enforcement and monitoring difficult.

According to the SAHRC Report (2002), an alternative to further piecemeal amendment of the current legislative framework is to create one comprehensive South African disability act. In this way, the rights of people with disabilities may be promoted in a more streamlined and mainstreamed way. Legislation and policy provide vital tools for creating a just and equitable society, and giving full effect to our Constitutional values. However, legislation alone will not cure inherent and deeply entrenched social disorders. We must all be committed to explicitly and equitably including people with disabilities in all our plans and activities. In all sectors planning and budgeting processes must accommodate the needs and rights of people with disabilities. The process of developing new strategies, laws and regulations must necessarily include people with disabilities as equal partners. All decision makers - government officials, legislators, employers, architects, property developers and others - have a constitutionally mandated responsibility to remove barriers that prevent individuals with disabilities from enjoying their rights. It is hoped that this report will add value and impetus to the process of making our society more inclusive of people with diverse abilities and needs. The Commission intends taking developments forward with ongoing investigation, monitoring and collaborative forums. By respecting the rights of the most vulnerable and marginalized members of society, the lives of all South Africans will be enhanced (SAHRC, 2002).

2.7 SUMMARY

This chapter looked at the education of the learner with Asperger Syndrome. Commonly used terms were defined. Placement patterns throughout the education framework were seen to be closely linked to the social milieu and beliefs about disability as well as education policy of the time. Emphasis on the rights of persons with disabilities, the questioning of the efficacy of specialised education, the influence of the postmodernist world view as well as the strides in technology have resulted in world-wide changes in the education of learners with Asperger Syndrome. The support for inclusive education has in many countries resulted in the inclusion of a significant percentage of learners who have Asperger Syndrome in regular classes in the mainstream (e.g. Australia and the USA). An alternative in practice at present is to place learners who have Asperger Syndrome in special units/centres attached to mainstream schools (e.g. Britain, USA and Australia). There is, however, an international shift away from the special, segregated, residential schools for learners

with learning disabilities and special needs. Advocates of full inclusion or the placement of all learners in the mainstream have met with criticism from the majority of educators of learners who have Asperger Syndrome. Most educators favour a choice of a range of placement options informed by the specific needs of the individual learner (Byrnes, 1998; Afzali-Nomani, 1995). Educators argue that full inclusion of learners who have Asperger Syndrome does not meet their needs for academic and social development adequately.

As discussed in Chapter One, the South African education system is in the process of transforming and policy indicates that South Africa is well on its way to implementing a single inclusive system of education. According to recent policy discussion documents, special schools for learners with Autism Spectrum Disorders will continue to serve learners in need of intensive support and will serve as a resource centre for educators in the mainstream. Learners on the lower end of the Autism Spectrum, who are not able to cope in ordinary classes in the mainstream with support, will be educated there.

The educational needs of learners who have Asperger Syndrome were discussed and the implication of inclusion considered. The advantages and concerns about including these learners were discussed.

It is clear from the legislation and documents printed by the educational departments of South Africa that children with special needs could be successfully included in the mainstream education with the support of specialist centres. By looking carefully at the layout of the White Paper 6 and the Curriculum 2005, it is clear that guidelines already exist for establishing specialist centres for learners with learning difficulties in the South African mainstream schools.

After a review of the literature, it was decided that the following factors should be included in the field study of the factors that contribute to establishing a support unit/centre for learners with Asperger Syndrome in the mainstream education system:

- For the United Kingdom perspective, I will look at the intrinsic and extrinsic factors related to the learners in the centre and how these will contribute to their inclusion in a mainstream secondary school. The learners and the influence of the Support Centre in the mainstream school will be looked at in a case study;

- For the South African perspective, I will also look at the intrinsic and extrinsic factors related to establishing specialist centres in mainstream schools and how these can possibly contribute towards including learners with Asperger Syndrome into mainstream schools.

In Chapter Three a clear description is given of the research methodology used in this study.

CHAPTER 3

RESEARCH DESIGN AND METHODOLOGY

3.1 INTRODUCTION

In this chapter the research design and methodology of this study will be discussed. First, I provide a description of the research approach, followed by a closer look at both the design and methodology of the research. I have used Mouton's (2001:56) understanding of the term 'research design', which refers to the aims and data needed to address the research questions. I am also using Mouton's (2001:56) view of methodology as the processes and actions used in the implementation of the data production. In my description of methodology I pay particular attention to sampling, data collection, data processing techniques, methods of data interpretation as well as to reliability and validity. I also discuss ethical issues. A description of the data analysis process concludes this chapter.

3.2 RESEARCH QUESTION

According to Willig (2001:19), most qualitative research projects are guided by one or more research questions. Willig explains that research questions are different from hypotheses. While a hypothesis is a claim, derived from existing theory, which can be tested against empirical evidence, and then either rejected or retained, a "a research question, by contrast, is open-ended" Willig (2001:19). That means that questions cannot be answered with a simple 'yes' or 'no'. In addition, a research question calls for an answer which provides detailed descriptions and, where possible, also explanations of a phenomenon Willig (2001:19).

Since I was interested in reaching understanding, I used a research question to guide this study and produce relevant data about the phenomenon under investigation. The detailed descriptions of the data produced are presented in Chapter Four. The following research question served as the guide for this study:

In what way can a specialist centre contribute to the inclusion of learners with Asperger Syndrome?

As the researcher I serve as a 'translator' in order to give the reader access to the experiences of the learners, educators, parents and professionals, accounting for experiences that might not be obvious. The main focus is to understand the phenomenon of the learners, educators, parents and professionals' experiences of their supporting role in the mainstream secondary education. According to Giddens (1976 cited by Le Grange, 2000), this objective can be achieved through an empathic identification with the educators and by trying to reach an understanding of their subjective experiences.

3.3 RESEARCH AIMS

As discussed in Chapter One, the aim of this study is to explore and understand in what way a specialist centre attached to a mainstream secondary school can contribute towards the inclusion of learners with Asperger Syndrome in the mainstream school. The study also aims to understand, using insights from the literature study, what intrinsic and extrinsic factors could contribute to the success of inclusion in this situation.

This research project has is exploratory in nature. According to Durrheim (1999:39), exploratory studies are used to investigate areas in which little research has been done and to look for new insights into phenomena. I set out, therefore, to explore the relatively unknown and unresearched area of Inclusion of learners with Asperger Syndrome into mainstream secondary schools.

I explored the phenomenon of a specialist centre and how it supports learners with Asperger Syndrome who have been included into a secondary mainstream by interviewing educators, learners, parents and professionals individually and by conducting observations in the mainstream and specialist centre. Through the produced data I gained new insights into educators', learners', parents' and professionals' experiences on this matter. Below is a brief description of the context in the data were produced.

3.4 RESEARCH DESIGN

3.4.1 Introduction

According to Merriam (1998:6), a research design refers to the overall plan or blueprint according to which information (data) will be assembled, organised and integrated, which will result in a specific end product. Merriam (1998:3) explains that

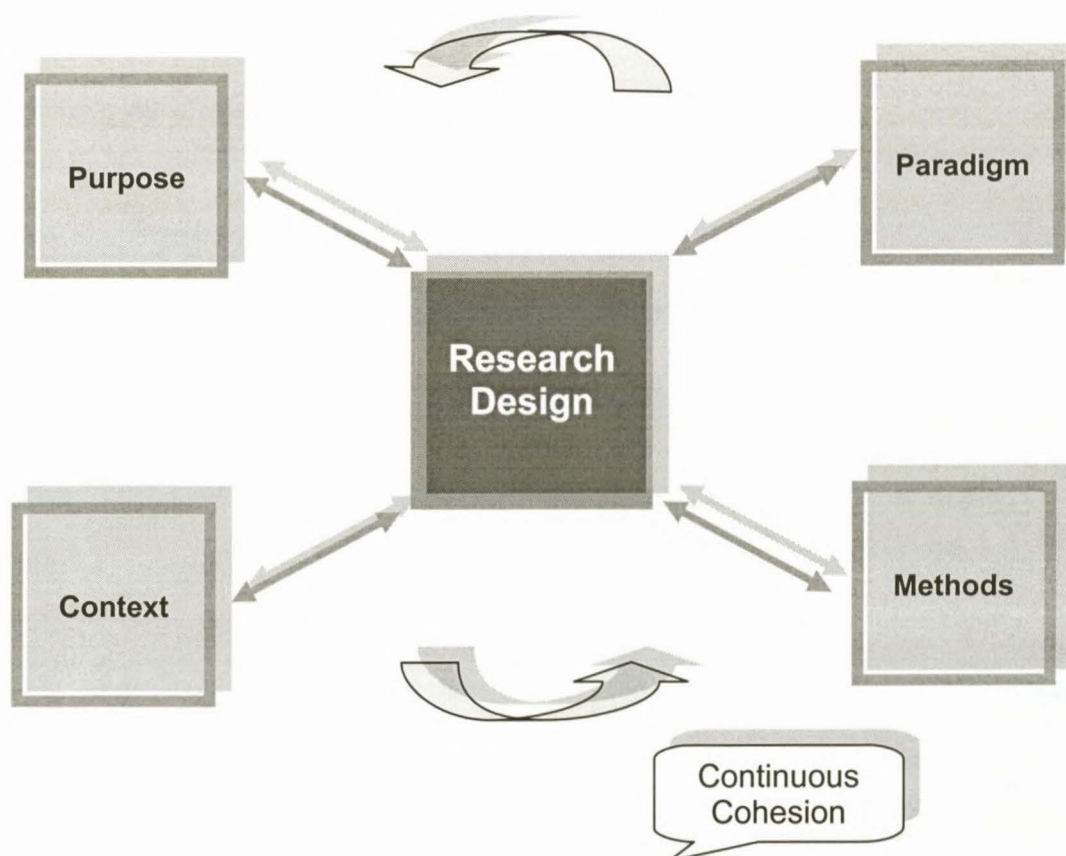
the type of design used is informed by the worldview of the researcher, the nature of the research problem, the questions it raises and the product desired. Durrheim (1999:29) provides a useful perspective, arguing that a research design can also be seen as a strategic framework for action that serves as a bridge between the research question and the execution of the research. He argues that this 'framework' should be coherent in order to provide valid answers to the research questions:

The design is coherent because the techniques of sampling, data collection and interpretation as well as the context of the study 'fit' within the logic of the interpretive paradigm and with the purpose of the research (Durrheim, 1999:35).

More specifically, the research design can only be coherent when the *purpose* and *paradigm* of the study, the *methods* used for data production, and the *context* in which the study is undertaken are in harmony with one another (Durrheim, 1999:35).

Below is a diagrammatic representation of the cohesion of a research design.

Figure 3.1: Research Design



(Durrheim, 1999:33)

In order to explore the research question, I chose a qualitative research design. The research method I used is case study.

According to Merriam (1998:7) and Mertens (1998:160), qualitative research refers to research that is designed to provide an in-depth description of a specific phenomenon. It is research in which data in the form of words rather than numbers are produced and such data are used to convey what the researcher has learned about the phenomenon. It follows that qualitative research is concerned with the study of phenomena in their natural settings as they are lived and experienced. The interest is therefore in the process rather than the outcomes. Denzin and Lincoln (as quoted in Mertens 1998:159) elaborate on qualitative research in the following way:

... multi-method in focus, involving an interpretive, naturalistic approach to its subject matter. This means that qualitative researchers study things in their natural settings, attempting to make sense of, or interpret phenomena in terms of the meanings people bring to them ...

The value of qualitative research is that qualitative research can reveal how all the parts work together to form a whole Merriam (1998:6). Since I was concerned to explore the role of all involved at the specialist centre at the secondary school in establishing effective inclusion for learners with Asperger Syndrome, qualitative research was appropriate.

Some key aspects of qualitative research relevant to this study include the following:

- Qualitative study takes place in the real world in which the phenomenon takes place (Merriam 1998:7). This study was based at the site of learning, namely the secondary school, to gain insight into the meanings given by the participants to their worlds;
- Data in the form of words rather than numbers seemed most appropriate for this study;
- Qualitative research is inductive in nature. Abstractions, concepts, hypotheses or theories are built rather than tested (Merriam 1998:7; Mertens 1998:160; Huysamen, 1994:172);
- The researcher is the primary instrument of data collection and analysis (Merriam 1998:7; Mertens 1998:175). Several methods of data collection are used in qualitative research. Interviewing, observation and document review were the methods employed in this study.

Leedy (2001:153) explains that a descriptive or qualitative research design aims to examine events or phenomena in the way that they are lived. There is no manipulation or treatment of the subject and the researcher takes things as they are. He also points out that the researcher might be interested in studying people's experiences and perceptions, and might even have personal experience related to the phenomenon, as in the case of this study.

In this study the people whose experiences were being studied were the educators, professionals, parents and learners from a mainstream secondary school in Wales. In the next section I will discuss the research method that was used to conduct this study.

3.4.2 Research approach

An interpretive research approach was used to conduct this study. According to Terre Blanche *et al.* (1999:123), the interpretive research approach assumes that people's subjective experiences are real, that we can understand others' experiences by interacting with them. For that reason a qualitative research design is best suited for this task. Terre Blanche *et al.* (1999:125) emphasize the importance of ascertaining the nature of these experiences within the contexts they occur. Since interpretive researchers want to make sense of feelings, experiences, social situations or phenomena as they occur in the real world, it follows that it is important to study them in their natural setting (Terre Blanche *et al.*, 1999:127). The goal of an interpretive approach is the understanding of a social phenomenon (Schwandt, 1998:223). This study aimed to understand the social phenomenon of educators, learners, parents and educational authority's experiences by launching an investigation within the natural setting of the secondary mainstream school. Schwandt (1998:225) explains that understanding can be described as the process by which the researcher arrives at the interpretation of human action. Schwandt (1998:225) adds that understanding is:

... less like a process of getting inside the actor's head than it is a matter of grasping inter-subjective meanings and symbolizing activities that are constitutive of social life (Schwandt, 1998:226).

3.4.3 Research method

Gough (2000:4) considers that the methodology chosen provides the rationale for the procedures the researcher uses. Mouton (2001:55) takes a more rationalist view

in describing research methodology as the systematic, methodical and accurate execution of the research design where "... various methods and tools are used to perform different tasks".

It is important to make the distinction between the terms *methodology* and *method*. According to Harding (1987, cited in Le Grange, 2000:192) *methodology* is an interpretive framework that guides the research process, whereas, *method* refers to the techniques used to produce the evidence or data. In this study the method was a case study.

In broad terms a case study is an empirical inquiry that 'investigates' a contemporary phenomenon within its real-life context (Yin, 1989:13). Merriam (1998:34) argues that qualitative case study can be defined in terms of the unit of analysis, the bounded system, the process of carrying out the investigation and the end product. It seems, however, that the unit of analysis, namely the case, is the chief characteristic of this method of research. According to Smith (in Merriam, 1998:27), the case is defined as a bounded system, a single entity, a unit around which there are boundaries. Similarly, Miles and Huberman (1994:25) speak of a case as "a phenomenon of some sort occurring in a bounded context".

Case study focuses on holistic description and explanation. Yin (in Merriam, 1998:29) notes that case study research is well suited to situations in which it is not easy to separate the phenomenon's variables from its context. In this study, the phenomenon of a specialist centre in the mainstream secondary school is seen within the context of the broader systems in which it exists and functions. It is not possible to understand the phenomenon in isolation from its context.

Stake (1994:243-244) points out that, in general, a case study is appropriate for a study interested in detailed information specific to a particular context. Case researchers seek out both what is common and what is particular about the case, but the end result regularly presents something unique. This uniqueness can extend to the nature of the case, its historical background, the physical setting, other contexts, other cases through which this case can be recognised and finally the participants through whom the case is revealed.

One will not always know at the outset what the issues, perceptions and useful theories might be when doing case study (Stake, 1994:240). Case researchers enter the field expecting, sometimes knowing, that certain events, problems and

relationships will be important, yet discover others and find that the ones they thought important are sometimes of little consequence. Researchers normally only decide what themes to build their research around as the study develops. The case develops in the process of producing data and writing. In addition, the working definition of the case can change during the process. Stake (1994:241) also makes the important point that, though committed to empathy and multiple realities and even though guided by what the case indicates is most important, the researcher decides what the case story is or at least what the case story he or she will communicate is. "More will be pursued than was volunteered. Less will be reported than was learned" (Stake 1994:241). For Merriam (1998:30) the end product of a case study is comprehensive understanding gained through description of the phenomenon under study.

3.4.3.1 Sampling

Merriam (1998:61) explains that purposive sampling is based on the assumption that the researcher wants to understand a phenomenon and must therefore purposefully select a sample from which most can be learnt. Wood (1992:2823) provides a useful elaboration in arguing that purposive sampling is done so that participants are included who are knowledgeable or 'information rich'. By purposefully selecting the specialist centre for the case study, I naturally included all the participants in its day-to-day functioning:

... [in] *purposive sampling* ... participants are selected according to criteria of relevance to the research question. This means that the group of participants is *homogeneous* to the extent that they share the experience of a particular condition, event or situation (Willig, 2001:58), (emphasis in original text).

Therefore, purposive sampling was performed to include knowledgeable participants who could share their experiences, and not to include just any willing participant.

This study made use of two non-probability sampling procedures, namely convenience and purposive sampling. Merriam (1998:61) confirms that non-probability sampling procedures are the preferred choice for most researchers who aim to produce qualitative data, as is the case with this study.

My selection of the case for this study can be related to purposeful and convenience sampling by specifically choosing the specialist centre at a secondary mainstream school in Wales because of its availability and accessibility. I am an employee at this

school and teach as the specialist teacher in the specialist centre from where learners with Asperger Syndrome are supported in the mainstream secondary school. In purposefully selecting the case, I also selected the specific educators, learners, parents and educational authority from the above-mentioned secondary school.

Criteria were set up beforehand to indicate certain prerequisites with which the participants had to comply. Vaughn, Schumm and Sinagub (1996:58) state that in purposive sampling the participants should be selected via predetermined criteria. The purposive sampling followed the following process:

- The specialist centre that was opened to help with the inclusion process for learners with Asperger Syndrome was selected.
- Learners with Asperger Syndrome that were included in the mainstream secondary school were selected. This included all learners with Asperger Syndrome that received support from the specialist centre;
- Parents of learners with Asperger Syndrome who were receiving support from the centre;
- Educators working with learners with Asperger Syndrome in the mainstream secondary school;
- Support staff supporting learners with Asperger Syndrome in the mainstream secondary school;
- Professionals attached to the specialist centre.

The chosen participants formed a homogenous group in terms of their experience as educators, learners, parents and professionals at the same school.

3.4.4 Context

I chose a specialist centre in a mainstream secondary school in Wales as the context for this research, because I am a specialist teacher at this school and I live in the community that is attached to the school. I feel I have some understanding of the socio-economic, political, social and schooling systems in this town. This understanding helped me reach greater insight into the data produced.

The mainstream secondary school has approximately 1000 learners, averaging between 10 and 18 years of age. Although the school uses English and Welsh as

parallel mediums for education, approximately eighty per cent of the school children are English speaking as opposed to Welsh speaking.

The school recently celebrated its 50th year of existence. It places an emphasis on leadership development, academic quality and participation in various extramural activities. This is a rural school and most learners come from a farming background. Most of the learners are used to outdoor activities and the school promotes an outdoor lifestyle for all teaching.

The feeder areas for this school are six villages and surrounding farms. Learners are transported to school by bus. The demographics of the surrounding areas are largely those of an agricultural, livestock farming community.

The school hosts a very large number of teaching staff, approximately sixty full-time posts. The principal, four deputy heads and nine heads of department constitute the executive committee. The governing body consists of parents, the principal, learners and educators. The local education authority funds all teaching resources and staff training and salaries. The local education authority regularly visits the school and regular inspections are held to improve structures in the school. The school recently had a formal inspection and proved to be one of the top schools in Mid-Wales.

Finally, I would like to make the point that as a researcher, my emphasis is on studying human experience in the natural setting of the school, through the eyes of the professionals themselves, who describe and understand a phenomenon that is within their context (see Babbie *et al.*, 2001:278).

Most of the research was conducted in the specialist centre that provides support for learners with Asperger Syndrome in the mainstream school. This centre was opened January 2003 and forms part of the mainstream school (it is a converted classroom situated in the mainstream school). The main function of this centre is to provide skills to help the learners with Asperger Syndrome to cope in the mainstream school. Learners with Asperger Syndrome register in the centre each morning where their day is structured and schedules are provided. The learners then attend at least 5 lessons per week in the centre where they are taught lessons in social communication, behaviour managements and given specialised therapy sessions to provide support for them in the mainstream. As I established in Chapter One, the centre supports the inclusion process by providing effective structures to make inclusion possible for all of the learners with Asperger Syndrome. Support is also

given to the staff in the school and regular training sessions are held for staff and professionals in the school. People from the community can access the resources of the centre to obtain information about Asperger Syndrome to help them understand the syndrome. The centre does some valuable outreach work in the local community to create an awareness of Asperger Syndrome. The centre has a long-term outlook and plan for post-school placements with professionals involved.

At present the centre hosts 8 learners, but more learners with Asperger Syndrome will be able to benefit from the centre every year. More will be said about the centre later.

3.4.5 Data production

I have decided to make use of the term data production rather than data collection. I have done this in light of the interpretive approach/paradigm that provides the framework for this study. As researcher, my own subjective reality is framed by the individual life experience that I have at the secondary mainstream school as a specialist teacher; this then shapes the way I produce the data. The data for this study was collected prior to the actual study, as I was working in the environment and decided to conduct a case study upon the data collected.

According to Le Grange (2002), data production techniques could include questionnaires, participant observation, interviews, workshops, focus group discussions, etc. This study made use of three methods to produce data according to the research question, namely semi-structured interviews, observations and personal records. A literature review formed an important part of this research and can therefore not be excluded in the final production of this study.

3.4.5.1 Literature Review

According to McKillup (2002:33), a literature review is an evaluative report of information found in the literature related to a selected area of study. The review should describe, summarise, evaluate and clarify this literature. It should provide a theoretical basis for the research and help to determine the nature of the research. Works which are irrelevant should be discarded and those which are peripheral should be looked at critically. McKillup (2002:34) argues that a literature review is more than a search for information, and goes beyond being a descriptive annotated bibliography. According to him, all sources included in the review must be read,

evaluated and analysed, but relationships between the literatures must also be identified and articulated in relation to the field of research.

The reasons for doing a literature review for my study was to provide a context for the research I was doing and to justify the research. It was also to ensure that I could gain from any similar studies that had been done and accurately mark this as a 'replication study' if it proved to be the case.

According to McKillup (2002:33-34), a literature review is also done to show where the research fits into the existing body of knowledge and to enable the researcher to learn from previous theory on the subjects. The literature review illustrates how the subject has been studied previously and outlines gaps in previous research. Finally, the literature review shows the way in which the study is adding to understanding and knowledge of the field and helps to refine, refocus or even change the topic.

3.4.5.2 Interviews

In this study individual semi-structured interviews were an important part of data production.

Babbie and Mouton (2001:289) claim that the individual interview is one of the most common qualitative methodologies of data production. The interview relies on the fact that people are able to give information regarding their practices, actions or experiences to those who ask questions. As Babbie and Mouton (2001:289) suggest, the interview is therefore essentially a conversation between the interviewer (in this case me) and the individuals who form part of the research.

Individual semi-structured interviews were conducted with various educators, parents, learners and professionals. Interviews, which are "conversations with a purpose", provide a valuable means of accessing the information that people have of their world and the way they experience it. Interviews are conducted to obtain information on things we cannot directly observe, such as feelings, attitudes, thoughts, intentions, past events and events that preclude the presence of the researcher. Interviewing therefore allows the researcher to enter into the other person's perspective (Merriam 1998:72).

Walker (1995:39) usefully describes the role of interviews in reducing misunderstanding; clarification can be done immediately and one is able to expose subjective definitions of experiences. He does, however, acknowledge that there are

disadvantages, which may include: bias, problems of objectivity and problems in the identity of the interviewer. I did not anticipate these problems as the nature of this study allowed for the subjective interpretation of personal experience as a specialist teacher in the specialist centre.

Interviews were held each term with parents, educators, professionals and learners in the centre. These interviews were conducted in an informal manner and were between 30 and 60 minutes long. Interviews with learners were held weekly. These interviews were informal and took place in small group discussions with other peers. Appointments were made with educators at the school at a time that was convenient for them and me so I could interview each individual separately. I recorded the interviews informally for the purpose of transcription, as it was the contents of the interviews that needed to be analysed.

The venue for the interviews was the secondary school. Most interviews took place in the specialist centre. Robson and Foster (1989:52) suggest that the interviewee be put at ease over refreshments and be greeted in an informal manner to help relieve any anxiety. They also suggest that seating should be arranged in such a way as to avoid continual eye contact. As Robinson and Foster (1989:52) suggest, this can be achieved by placing the seats at right angles to each other. I made use of both of these above-mentioned suggestions in all of the interviews conducted, except the interviews with the learners, where we sat around a classroom table.

According to Hatch (2002:91), interviews are used to uncover the meaning structures that participants use to organize their experiences. The author distinguishes between formal and informal interviews and states that formal interviews are also called 'semi-structured' interviews (Hatch, 2002:94).

Willig (2001:22) describes a semi-structured interview as an opportunity for the researcher to hear the participant talk about a particular aspect of their experience. It is the research question that drives the interview and the emphasis is on the meaning of the answers produced by the interviewee. The research question, as mentioned earlier in this chapter, was employed to guide the interviewing. This type of interview allows for more flexibility and adaptability as new data emerge. Questions were structured around specific themes indicated as important in the literature. The wording and the order were not strictly adhered to. A less structured approach was used to allow the researcher to access the unique experience of the

respondents and to prevent valuable emergent data from being overlooked (Hysamen 1994:145).

During the formulation of the questions I used it in the interviewing, I scrutinized the formulation and applicability of the questions, chiefly in the light of the guidelines for effective questioning presented by Hatch (2002:106).

I posed open-ended questions to allow the participants to share their unique experiences in their own words, without guiding their answers in certain directions. The interviews were conducted in English, as this was the first language of all the participants and thus the language familiar to them. I also ensured that the language I used was free from jargon so its meaning would be clear and the interviews could flow easily. In addition, all the questions asked were neutral in the sense that they did not point the participants in directions that would favour my perspective or the outcomes of the data. The questions also reflected respect for the informants and my presumption that they were knowledgeable. This was done in three ways. First, the questions were formulated in a way that invited the participants to teach me about their own experiences. Second, the way the questions were formulated indicated to the participants that I valued their insights and shared experiences. And lastly, the questions were designed to generate answers related to my research question. As a result the information produced by the interviews produced rich data.

As I said earlier, interviews with parents, learners, educators and professionals were held each term (see Table 3.1) and formal structured meetings were set up with parents to determine the success of the centre and their input into the development of the centre was valued in these meetings. Interviews were held with learners on a weekly basis to determine their feelings and input into the development of the centre.

Table 3.1: Schedule of interviews held

	1	2	3	4	5	6	7
Parent A	January 2003	April 2003	July 2003	September 2003	December 2003	January 2004	April 2004
Parent B	January 2003	April 2003	July 2003	September 2003	December 2003	January 2004	April 2004
Parent C	January 2003	April 2003	July 2003	September 2003	December 2003	January 2004	April 2004
Parent D	January 2003	April 2003	July 2003	September 2003	December 2003	January 2004	April 2004
Parent E	January 2003	April 2003	July 2003	September 2003	December 2003	January 2004	April 2004
Parent F	January 2003	April 2003	July 2003	September 2003	December 2003	January 2004	April 2004
Parent G	January 2003	April 2003	July 2003	September 2003	December 2003	January 2004	April 2004
Parent H	January 2003	April 2003	July 2003	September 2003	December 2003	January 2004	April 2004
Student A	Weekly discussion lessons of 1 –2 hours were held						
Student B	Weekly discussion lessons of 1 –2 hours were held						
Student C	Weekly discussion lessons of 1 –2 hours were held						
Student D	Weekly discussion lessons of 1 –2 hours were held						
Student E	Weekly discussion lessons of 1 –2 hours were held						
Student F	Weekly discussion lessons of 1 –2 hours were held						
Student G	Weekly discussion lessons of 1 –2 hours were held						
Student H	Weekly discussion lessons of 1 –2 hours were held						
Educator A	January 2003	March 2003	September 2003	January 2004	April 2004		
Educator B	February 2003	April 2003	October 2003	January 2004			
Educator C	January 2003	March 2003	September 2003	January 2004			
Ed. Psych.	January 2003	April 2003	July 2003	September 2003	December 2003	January 2004	April 2004
Sch. Nurse	January 2003	July 2003	September 2003	January 2004	February 2004	April 2004	
SENCO	January 2003	April 2003	July 2003	September 2003	December 2003	January 2004	April 2004

In the interviews I made use of specific guiding questions, which covered a general outline of specific topics that I wanted to raise and were directly related to my research question. These topics were developed by means of a thorough literature

review which revealed many key factors in the area of inclusion for learners with Asperger Syndrome.

I also allowed for unplanned topics and used them to guide further discussions aimed at revealing information directly related to the research question.

3.4.5.3 Participant-observations

Observation was used as a method of data production. I spent most of my time observing the learners and the educators in the natural learning environment of the mainstream classrooms and specialist centre. A passive participant approach was used during observation in the mainstream classrooms, but an active participant approach was used in the specialist centre. According to Mertens (1998:317), the passive participant approach implies that the researcher is present, but does not interact with the participants. The opposite is true of the active participant approach. When I conducted lessons and administrated activities in the specialist centre, I made informal field notes. Field notes consisted of daily reports of observations done by support assistants working on a one-to-one basis with learners (see Annexure A). I attended a minimum of ten one-hour lessons per week, where I took observational notes about the learners' behaviour in mainstream education.

Observation allows the researcher to access information first-hand in the context of the natural environment. It is deliberately planned and systematically recorded (Merriam 1998:95). I was particularly interested in the physical positioning of the learners as well as the educators in the class, the management in the mainstream lessons, the social interaction of the learners in the mainstream school and in the classroom environment, their participation during lessons, the type of educator support provided as well as unplanned themes that emerged. I was also interested in the management of the specialist centre and the programmes it taught to help the learners with Asperger Syndrome in the mainstream education. The observation focused on the centre, management of the centre, support the centre gave to the mainstream, and learners reaction in and outside of the centre.

I took the role of moderator for the interviews and observation. Each participant was interviewed individually. This interaction elicited the unique ideas and experiences of the educators, learners, parents and professionals (Fern, 2001:168). According to Fern (2001:168), the moderator should be more detached when seeking unique ideas, but when uncovering ideas, the moderator should be more like the

participants and blend into the discussions. It was difficult to establish whether unique or shared ideas are the ideal answer to the research question. In hindsight, both seem to provide valuable data. Therefore, I aimed to uncover both unique and shared ideas within the interviews.

Hatch (2002:135) warns researchers that when they act as moderators, it may be difficult not to subtly interject their own perspectives into the conversation or to ask leading questions. Therefore, I decided only to present the themes generated in the individual interviews as a stimulus for the discussions and emphasize the research question. Through this approach I strove to influence the outcomes interviews/discussions as little as possible.

According to Fern (2001:164), the physical location of the interview/discussion sessions is dictated by its accessibility and acceptability. The mainstream secondary school itself provided an ideal setting that was accessible and acceptable to all the participants. Most interviews and discussions were held in the specialist centre. Observations were done in the individual lessons and in the specialist centre.**

3.4.5.4 Review of personal records

Previous records on the learner's special needs and early intervention were consulted to understand their parameters of autism and early learning support provided. Case history material was gleaned from these records and triangulated with the interviews.

3.5 THE RESEARCH PROCESS

According to Terre Blanche *et al.* (1999:127) one must consider the interpretive research approach as a process rather than as a set of distinct procedures. In this section I explain the process that I used in this research study.

As the appointed specialist teacher of the specialist centre at the secondary mainstream school, I did not have to apply specifically for access to the school and learners. I had been working in the centre for six months before I decided to conduct my study. Most of the data had been produced by then and I had to formulate how I was going to use the information for this study.

The specialist centre and participants in the centre met the criteria and could therefore be included in this study. Parents, educators and professionals were added to this study and regular interviews, discussions and observations were held to

further my knowledge of the inclusion process of learners with Asperger Syndrome into the mainstream secondary school with the support from a specialist centre. Enough time was left between interviews for the interviews to be transcribed and themes to be identified.

The themes that emerged from the individual interviews were used as stimuli for further discussions. All observations were recorded in the special observation books used in this research and then transcribed. New themes emerged during the interviews and discussions. All these themes were identified and recorded. Below is a discussion on the way the data produced were analysed.

3.5.1 Data analysis

According to Hatch (2002:148), data analysis is a systematic search for meaning and a way to process data so that what has been learned can be communicated to others. This means organizing and interrogating the data in ways that will allow me, as the researcher, to see patterns, identify themes and make interpretations. Mouton (2001:108) confirms the above by stating that the aim of the analysis is to understand the various elements of one's data and to identify patterns or themes in the data. Merriam (1998:155), Mertens (1998:348) and Berg (1995; 174) confirm this by saying that data analysis is the complex process of selection, sharpening, sorting, focusing, discarding and organising in order to make sense of the data, and to draw conclusions and verify the data. Merriam (1998:155) highlights the process of making meaning that informs data analysis.

Taking the above into account and relating to Chapter One, it is necessary to repeat that qualitative research is an ongoing process. Data analysis in this type of research is also ongoing and occurs in the process of the researcher engaging with emergent data. Miles and Huberman (1994:249) define qualitative data analysis as a process consisting of three phases: data reduction, data display and drawing conclusions/verification. These three processes are in constant interaction and are interwoven throughout the research process.

The way in which I aimed to 'break' down the data was to identify themes. According to Barrit (1986, cited in Leedy *et al.*, 2001:153), the central task of data analysis within a qualitative research design is to identify common themes in the participants' descriptions of their experiences. Belle Brown (1999:122) explains that, as the analysis cycle proceeds, the generated ideas will begin to cluster under major

themes until there are no more themes emerging - hence, saturation has been attained.

In this study the process of analysis was underway at the early stages during the literature review, upon reflection during and immediately after the data collection, during discussion with learners, during the transcription, during analysis of the transcriptions, presentation of data and discussion of findings. Notes were made of observations and intuitive thoughts and ideas as I became more involved in the process.

The analysis of the data in this study was based on the content analysis method suggested by Berg (1995:175-192) and Merriam (1998:159-160). As the name indicates, it is concerned with the analysis of the content of data collected. Berg (1995:175) cites Holsti's definition of content analysis as:

... any technique for making inferences by systematically and objectively identifying special characteristics of messages.

The data were analysed for both manifest and latent messages. This implies that both messages are physically present and the researcher's interpretation of the underlying meaning reflects this.

Creswell (1998, cited in Leedy *et al.*, 2001:154) describes a few typical steps of data analysis. Below a brief explanation on how I implemented them.

Identify statements that relate to the topic

I repeatedly read the informal transcripts of the interviews and identified those statements that related to the topic under investigation. The statements that were irrelevant were left out of the analysis.

Group the statements into meaningful units

As I moved systematically through the data, certain units became apparent, i.e. statements regarding learners; statements regarding parents; statements regarding the school. I grouped these statements together.

Develop an overall description of the participants' experiences of the phenomenon

I developed an overall description of the themes identified in the interviews and observations.

Smith (1997, cited in Willig, 2001:53) talks about an engagement facilitated by a series of steps that allows the researcher to identify themes from the transcripts and integrate them into meaningful clusters, first within and then across interviews (Willig, 2001:53). As mentioned earlier, I made informal notes during the interviews and then transcribed them. Willig (2001:54) points out that these transcripts then have to be analysed one by one.

Hatch (2002:179-191) describes a model for analysing the produced data called *interpretive analysis*. It is a process of constructing meaning from data, where the emphasis is on the researcher's interpretations as an active part in the research process (Hatch, 2002:180). I incorporated aspects of Hatch's model into the steps of analysis undertaken in *interpretative analysis*, as Willig (2001:53-60) presents it.

Initial encounter with the text

According to Willig (2001:54), the first stage of an analysis involves the reading and re-reading of the transcripts and the researcher produces notes of issues that come up upon the initial encounter with the text. Hatch (2002:181) also suggests that the researcher should start the analysis by just reading the data to get a sense of the whole before producing notes.

Identification of themes

The second stage of analysis requires the researcher to identify themes that characterize different sections of the text. The theme titles should then capture the essential quality of what is represented by the text (Willig, 2001:55). According to Mason (1994:91), the purpose is to search the data for themes, develop analytical categories and to index the data accordingly.

Taking the considerable time necessary to find and code all the places where your interpretations are addressed gives you the data necessary to make good decisions about whether interpretations ought to be reported or not (Hatch, 2002:186).

Clustering of themes

According to Willig (2001:55), some of the themes in stage two form natural clusters of concepts that share meanings or references. These clusters need to be given labels that capture their essence and these labels should make sense in relation to the original data. An example of a clustering of themes is "learner's reactions". Here the essence of the statements, made by educators, parents and professions, are

their perception of what the learner's reactions are to inclusion in the mainstream education and to the specialist centre.

Production of a summary table

Willig (2001:55) describes this as involving the production of a summary table of the structured themes, together with quotations that illustrate each theme. Hatch (2002:187) describes this as the time to bring the pieces together into a meaningful whole. Willig (2001:55) contends that the summary table should only include themes that capture the quality of the participants' experiences about the phenomenon. Here a distinction is made between relevant and irrelevant themes, and some of the themes from stage two might have to be left out (Willig, 2001:55). This process is described as a method employed for "understanding the phenomenon better by grouping and the conceptualising objects that have similar patterns and characteristics" (Miles & Huberman, 1994:249). The process is conceptualised in Figure 3.6.1.

Integration of the interviews and observations

This section involves the final step of analysis in *interpretative analysis*. Because the data were drawn from different sources, it made sense to look across the entire corpus of data (Willig, 2001:58). According to Willig (2001:58), the first interview is used to set up the table. This is then used as the original list of themes to code the other interviews, adding or elaborating themes in the process (Willig, 2001:58). Mason (1994:105) describes this function as the principle of following up similar themes in the different data sets as a way of linking the data.

The integration of all the interviews, discussions and observations should then generate the main themes "which [capture] the quality of the participants' shared experiences of the phenomenon, and which, therefore, also tells us something about the *essence* of the phenomenon itself" (Willig, 2001:59). *Interpretative analysis* continues until that which is shared between the participants has been identified and captured in the main themes (Willig, 2001:59).

Morgan (1998b:83) contends that making comparisons across multiple individuals provides a better sense of which themes are most important. Each individual will have themes that they emphasize more than the others do (Morgan, 1998b:83). Therefore, comparing the individual interviews will reveal which experiences are specific to a certain person, and which themes came up repeatedly.

The following steps were implemented:

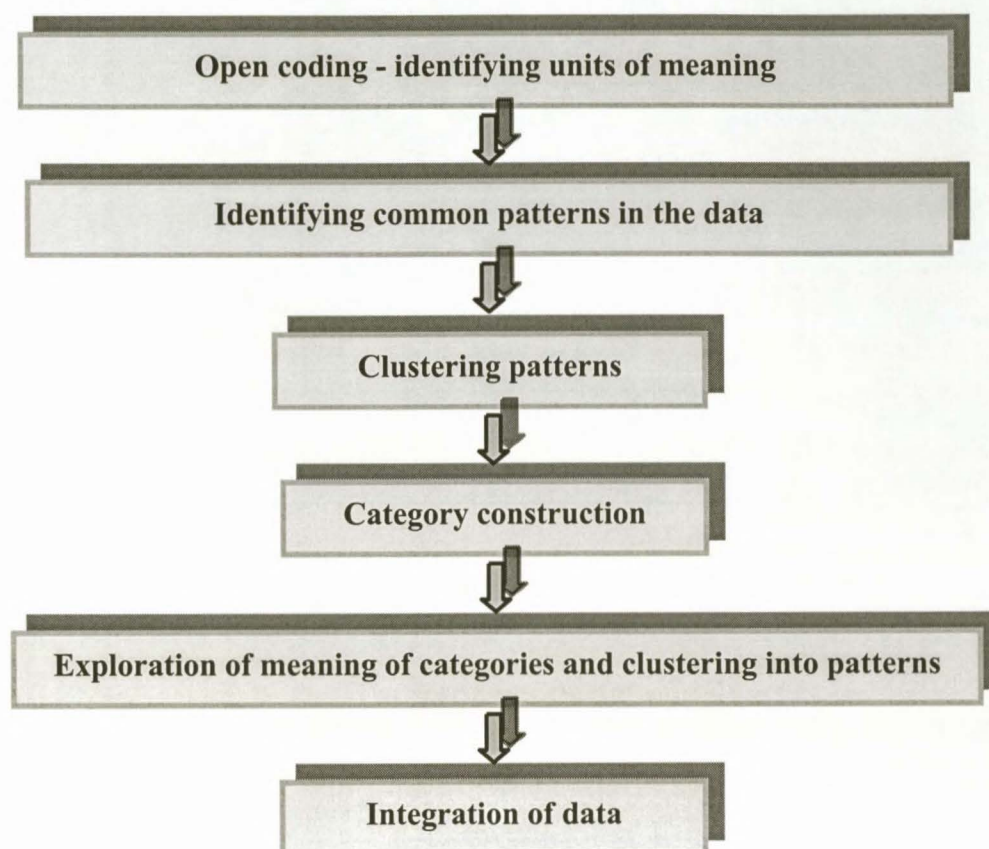
- Interviews were held with parents, learners, educators and professionals;
- A holistic understanding was formed, while keeping the research question in mind.

The process of open coding was applied whereby units of meaning (sentences or phrases that are understandable without additional information) were identified on the data source. These units were listed. During the process themes started to emerge and tentative themes were considered.

The data were sorted according to these themes. Data from the interviews, field notes and record reviews were continuously compared for consistency or differences. The meaning of the data in the categories was interpreted by the researcher and presented in the form of an accurate description. These categories or main themes were: child-related factors, school-related factors, family factors, external agencies and the local education authority's influence.

Willig (2001:60) suggests that the data analysis presentation can centre on the main themes, where each theme is introduced with its various manifestations.

Figure 3.2: The process of data analysis



(Miles & Huberman, 1994:249)

3.6 DATA VERIFICATION

3.6.1 Validity and reliability

Merriam (1998:198) refers to the importance of research being trustworthy to professionals in the applied field. Research is reliable to the extent that reliability and validity have been accounted for. Reliability and validity in qualitative research take on different forms to their counterparts in quantitative studies (Firestone in Merriam 1998:199). The importance of conducting research in an ethical manner is part of ensuring validity and reliability.

... regardless of the type of research, validity and reliability are concerns that can be approached through careful attention to a study's conceptualisation and the way the data were collected, analysed and interpreted ... (Merriam, 1998:199).

Various authors refer to the fact that there is no single commonly accepted standard for judging or ensuring the validity and reliability of qualitative research (Merriam

1998:167). Some even call the concepts by different names and identify credibility, transferability and dependability as concepts that parallel internal validity, external validity and reliability in other forms of research (Lincoln and Guba cited in Mertens 1998:181). The methods that were used in this study will be briefly discussed. The terms preferred for qualitative research will be used.

3.6.2 Credibility (parallels internal validity)

Credibility poses the question as to whether "there is a correspondence in the way the respondents perceived the social constructs and the way the researcher portrays their viewpoints" (Mertens 1998:181). In other words, it is important for the researcher to capture and portray the reality as it appears to the people in it. Several methods, suggested by Merriam (1998:204-205) and Mertens (1998:181-183), which were used to ensure internal validity in this study will be discussed below.

- **Triangulation**

"Triangulation involves checking information that has been collected from different sources or methods for consistency of evidence across sources" (Mertens 1998:183).

The triangulated data are assessed against each other to crosscheck data and interpretation. In this study triangulation was achieved through:

- The use of multiple methods of data collection namely interviews, observation and reviewing of records;
- Multiple data sources, namely the different interviewees. The learners, various educators, parents and professionals were interviewed;
- Multiple data analysts, namely the researcher and an independent coder. The researcher first transcribed the interviews, then identified semantic units of meaning and consequently patterns in the data collected by means of the content analysis method.

- **Peer examination**

The findings were discussed with fellow educationists and professionals who work in the field of Autism Spectrum Disorders. They were asked to comment on the researcher's findings as they emerged.

- **Researcher biases**

At the outset of this study the researcher's motivation for the study as well as her concerns around the placement of learners with Asperger Syndrome in Wales and South Africa were discussed. Furthermore the reason for the particular sample selection was discussed above.

3.6.3 Transferability

External validity refers to the degree to which one can generalise the results to other situations (Merriam 1998:207; Mertens 1998:183). The aim of qualitative research is not to provide generalised findings but rather a unique detailed description of a phenomenon. In order for the reader to judge the transferability of the study, the researcher should provide "thick descriptions", which are extensive and careful descriptions of time, context and culture.

3.6.4 Dependability

In quantitative research reliability refers to "stability over time" (Mertens, 1998:184) or the extent to which research findings can be replicated (Merriam 1998:204). Qualitative research does not aim to isolate laws of human behaviour, which in any event are dynamic and subject to ongoing change. Reliability as conceptualised for quantitative research is not appropriate for qualitative research, Guba and Lincoln (cited in Merriam 1998:206) suggest that the "dependability" or "consistency" of the data should receive consideration. Given a detailed description of the data collected, it is then required that the person interested in dependability examine whether the data make any sense. Dependability is closely linked to internal validity.

The strategies used to achieve dependability in this study are:

- A description of the researcher's position in this study;
- Triangulation in terms of multiple methods of data collection;
- Audit trail: Independent judges in the form of the supervisor and professionals working with the researcher were presented with every detail of the study and could therefore trail the researcher and authenticate the findings of the study (Guba & Lincoln as cited by Merriam, 1998:207).

3.7 ETHICAL CONSIDERATIONS

Several authors highlight the importance of taking precautions to avoid ethical dilemmas in research (Merriam, 1998:212-218; Mertens, 1998:275; Berg, 1994:212-214; Huysamen, 1994:178-185). Merriam (1998:212) notes that ethical dilemmas are likely to occur in qualitative research at two points, namely during the production of data and in the disseminating of findings. Ethics are also involved in the matter of obtaining informed consent of participants.

I share the views of Stake (quoted in Merriam 1998:214) that "qualitative researchers are guests in the private spaces of the world" and that this feeling of privilege underpinned the respect and courtesy with which participants were treated in the study. The following methods were employed to control ethical concerns in this study:

- **Confidentiality and anonymity**

The participants were assured that neither their names nor the name of the school would be used in the report or documentation of the data. The researcher's position of respect was communicated to them.

- **Informed consent**

Permission to conduct the research in the specialist centre was sought from the special needs directorate and local education authority. The participants in the research were informed of the purpose of the research and permission for interviews was sought from them. The purpose of the study was communicated as being to learn about how a specialist centre can contribute to the inclusion of learners with Asperger Syndrome into a secondary mainstream school. The participants were informed that participation was voluntary.

3.8 SUMMARY

In this chapter the research design of the study was described. The specific aspects of qualitative research design relevant to the study were discussed. The research methodology was described, including the method of sampling, data collection methods and method of analysis.

The qualitative research design appeared to be coherent with an interpretive approach that emphasises the understanding of an inclusive phenomenon. In this

study I sought to understand the phenomenon of a specialist centre and the experiences of the educators, learners, parents and professional's. The aim of this study was also to contribute to an understanding of this phenomenon, a relatively unknown area of research, and to look for new insights into it. Situating the study in the context of the school environment was also in keeping with the research design. Lastly, the methodology was appropriate because the way in which the research proceeded, including the methods used to produce the data, complemented the investigation of the phenomenon.

Throughout the chapter reference was made to the relevance and application of the methodology to this study. The chapter concluded with the discussion of reliability and validity and ethical considerations and the measures used in this study to enhance these aspects.

Chapter Four will concentrate on the implementation of the study. This will include the presentation, analysis and discussion of the data and findings of this study.

CHAPTER 4

IMPLEMENTATION OF THE STUDY

4.1 INTRODUCTION

In this chapter I will present a discussion of the research process of data production, the method of data analysis and the findings that emerge from this process. I will look at the experiences of the school, parents, learners, education department and professionals and how the specialist centre contributed to the inclusion of learners with Asperger Syndrome in a mainstream secondary school.

4.2 RESEARCH PROCESS

As a specialist teacher for learners with Asperger Syndrome in a mainstream secondary school, I spent at least fifteen hours per week observing learners with Asperger Syndrome in the mainstream. These learners also took specialised lessons, such as social studies, communication skills and therapies directed at their individual needs, with me in the specialised centre. In my previous job, I had worked as a support teacher in a mainstream primary school in South Africa. During this time I spent five hours per week supporting and observing a girl with Asperger Syndrome in her mainstream education environment and providing support to her classroom teacher. During this time I also visited a special school for learners with autism in Cape Town. I spent a total of four years observing learners on the Autism Spectrum in mainstream and special schools.

As a specialist teacher in the mainstream secondary school, I have first-hand access to important documents, files relating to the specialist centre and learners accessing the centre. The information gained from these documents was a valuable aid to my research.

I have daily contact with all the learners and educators attached to the centre. I also have daily contact with the parents of these learners by means of home-school books (a special book that the learners take home and in which I can write comments for parents). In addition, I have daily contact with our school's SENCO (special needs co-ordinator) as he works very closely with the specialist centre. I

have meetings once a term with the school nurse and education psychologist. I also have meetings once a term with all the parents of learners in the specialist centre (see list of meetings, Table 3.5.2 in Chapter 3).

All interviews were informally noted and transcribed once I had gathered all the information needed. Most of the interviews were conducted in the specialist centre located in the school. Once I had gathered all the information, I could analyse the raw data that emerged from the interviews and observations and identify themes.

The themes that emerged from the interviews and observations were used as stimuli for discussions held with parents, learners, educators and professionals during the last part of my research. I compiled a summary of the identified themes in Appendix B.

The themes generated in the interviews and observations are documented in this chapter. Here follows a presentation of those themes, starting off with the interviews, moving on to the observations and field notes taken during these observations and the personal documents and files. Lastly, I present an integrated table of all the identified themes.

4.3 PROCESS OF DATA PRODUCTION AND ANALYSIS

As mentioned in Chapter Three, data were produced through semi-structured interviews, observations and a review of personal records. The data was produced at different times over the period January 2002 to January 2004. This was done to get a cross-section of systemic factors that played a role in the specialist centre's aim to include learners with Asperger Syndrome into the mainstream school, as well as to obtain a range of data that would enhance an understanding of the phenomenon.

From the interviews and observations the following main themes were selected:

- Child-Related Factors (C)
- School-Related Factors (S)
- Family-Related Factors (FF)
- Education Department (D)
- Support (LS).

(See Appendix B)

The data on each learner was then categorised in APPENDIX C according to the above-mentioned main themes.

4.4 PRESENTATION OF INTERVIEWS

Interviews were held with the learners, parents, professionals and educators on a termly basis during review meetings and informal meetings with educators (E), the education psychologist (EdP), speech therapists (ST), School Nurse (SN), special needs co-ordinator (SENCO) physiotherapists (PS), parents (P), learners (L), support agencies (LSA) and other participants in the day-to-day functioning of the specialist centre. These interviews were minuted during formal meetings and notes were made during informal meetings. All the field notes (formal and informal) were used to produce the various themes.

During interviews with the school (Sch) field notes were made of how the school feels about inclusion, the specialist centre and the learners accessing support from the centre (see Appendix D for interview questions). Interviews and informal meetings with the local education authority (LEA) gave clarity about the support available for the centre and the involvement of the government in the specialist centre (see Appendix E for interview questions). Again field notes were made of the interviews. Various interviews with parents (P) confirmed their involvement with the school and the specialist centre (see interview questions in Appendix F1 and F2). Thus, field notes were made of all the interviews and then analysed and themes emerged.

The main themes in the educator's (E) semi-structured interviews centred on support in the classroom for the learners with Asperger Syndrome, the social integration of the learners, the attitudes of the peers, the involvement of the parents, the adjustments made to their teaching, the difficulties experienced, the support from other staff members, the amount and type of in-service training, the co-ordination of support, the behaviour of the learner, the progress of the learner, learners' experience of having learners with Asperger Syndrome in their classes, their coping strategies and the learners' advice to educators not yet exposed to this type of experience (Appendix A).

All the parents (P) were requested to come to the school to be interviewed. They were asked for background information about the learners, their challenging behaviour, their education, available support, family background, possible concerns

and follow-up contact with the school as well as their role in assisting their children (Appendix A).

The learners/students (S) were interviewed informally and access was gained to personal records. Informal discussions with the learners provided useful information about their past experiences, day-to-day challenges, feelings about school and the future, academic structure, organisational skills, feelings about support in the secondary school, peer relationships. These discussions were held over a one-year period. Some information was provided in writing (filling in a form), but most discussions were informal and took place during lesson times when the learners accessed the specialist centre (Appendix A).

The support workers (LSA) were interviewed at the school. They were asked about their role in supporting the learners, the methods used, information about the learners' history was given, role of the teachers and support staff, ongoing support, attitude of the school, in-service training, experience over a time, academic structure, adaptation skills and day-to-day working (Appendix A).

As I was employed at the school as the specialist teacher, I could give my own experience through the research and this study. I kept a record of the learners' behaviour, day-to-day management, meetings/discussions held, parents' letters and communication booklets, training modules I conducted for the teachers and support staff, meetings with outside agencies, teaching records and professional relationships with the learners in the centre.

4.5 THE ISSUE OF SUPPORT

According to Peter Clough (1998:3), inclusive education is rendered less effective if the learner, who experiences barriers to learning and/or the school, is not supported. In the mainstream secondary school where this study took place, the educators provide support based on the knowledge they have gained from in-service training. It is vital that this knowledge is continually updated as new facts and figures become available to support the learners with Asperger Syndrome in the inclusive education environment.

To support educators in their training and to provide information, the specialist centre is supported by a speech therapist, physiotherapist, school nurse, social worker, educational psychologist and an occupational therapist. Yearly reviews are held,

where all the participants express their views and present their findings on individual learners. The above-mentioned individuals hold assessment meetings once a term to determine successful inclusion.

Early intervention in terms of the learners' inclusion in the mainstream and the specialist teaching and support services provided by the specialist centre lay valuable foundations in ensuring successful inclusion for all the learners with Asperger Syndrome. The criteria for admission to the specialist centre are a valid diagnosis for Asperger Syndrome and a statement of special needs. This is then followed by an assessment of the learner by the various participants. Once this has been done, the specialist teacher writes up a special education plan. This individual education plan is reviewed each year after the annual review meeting.

4.5.1 Support assistants

Three full-time support assistants are attached to the specialist centre and support learners with Asperger Syndrome in the mainstream education. One full-time support assistant supports the specialist teacher in the specialist centre and supports the learners when they are in the specialist centre. Each support assistant notes their observations of the learners they support in each lesson. These notes contain important information and are regarded as field notes for this study. The support assistants receive training during in-service training days once a term. Support assistants are valuable key factors to help with the inclusion process that the specialist centre aims to achieve.

4.5.2 Specialist teacher

The specialist teacher manages the specialist centre and co-ordinates the support assistants. As the specialist teacher, I teach specialist subjects such as: behaviour management, social studies, social communication, friendship skills and study methods. For this study I did observations, interviews and took field notes to obtain the necessary information needed to support the research question.

The support offered by specialist teacher and the management of the specialist centre is the key factor in the successful process of inclusion of learners with Asperger Syndrome.

4.5.3 Specialist centre

The specialist centre was opened in January 2003. The main aim of the centre was to support learners with Asperger Syndrome, and to ensure successful inclusion of these learners into the mainstream secondary school.

This specialist centre is a base from which each day starts for these learners and to which they can go if they experience anxiety or barriers in their education. The specialist centre also represents a valuable means of equipping these learners with the necessary skills to cope in the mainstream setting.

4.6 SCHOOL-RELATED FINDINGS

Several categories were clustered under the pattern of school-related factors. These were the physical facilities at the school: administrative practices, educator-related factors, co-ordinating factors concerning the learners with Asperger Syndrome, classroom factors, social interaction, parental involvement and the issue of support. There is considerable overlap between categories due to the highly interactive nature of subsystems within the school.

Physical attributes

As previously mentioned, the secondary school under investigation is a mainstream establishment and is situated in Wales. The school consists of a brick building set in a rural setting outside the town. The school has various playgrounds and fields around its buildings that are accessible to the learners. This school operates as a mainstream secondary school for learners aged between 11 and 18. School hours are from 9:00 to 15:30. The size of the classes ranges between 25 and 35 learners.

A special learner-support department consists of three specially designed classes as part of the main school building. The specialist centre for children with Asperger Syndrome forms part of this specialist provision. At present the specialist centre is funded by the local education authority. The staff attached to this specialist centre consists of a specialist teacher (myself) and three support assistants. The school is aware of the need to remove physical barriers to learning and has made great progress in establishing a whole-school teaching environment for all learners.

According to the school's policies, all learners have a right to learn and the school welcomes all learners (from the catchment area), including those with Asperger

Syndrome. These learners are placed in the mainstream education system and supported by the specialist centre and specialist teacher.

The school-based administration takes place from the principal's office and the secretaries' offices. All records are kept in the school and are available from the head of year or special needs co-ordinator (SENCO). The specialist teacher from the specialist centre keeps all the records concerning the learners who access the centre. All academic records are stored on the school's mainframe computer and can be accessed by all teachers.

Attitude towards inclusion

Inclusive education has recently been introduced to this mainstream secondary school in Wales. Various training sessions were held in the school to train educators for the new inclusive educational approach. Learners with lower abilities have always been part of the mainstream education of this school, but taking in learners with profound learning abilities and disabilities was something completely new. The specialist centre was opened specifically to support the inclusion of learners with Asperger Syndrome. During the past year the school made a massive transformation to include these learners. The success of this approach has been overwhelming and it seems set to continue.

The attitude of the educators has changed from bewilderment and confusion to being very supportive and adapting their teaching strategies and methods. This was a whole-school approach and has been met with success and constructive achievement.

Educator-related factors

Educators and support staff were very positive about having learners with Asperger Syndrome in their mainstream classes. During the informal discussions held with educators, key words such as acceptance, a desire to help, ownership and normalisation reflected their openness. Their questions were answered at the teacher training sessions during in-service training days held in the school.

All the educators have been trained and received regular support from the specialist centre to help them cope with the learners with Asperger Syndrome in their classes. Support for educators is an important factor in that it empowers the educator to help the learners.

Educators have different personalities and this affects their teaching styles and flexibility. One educator found it very difficult to change his set teaching style and he felt inconvenienced by the presence of the learner with Asperger Syndrome. It is a bonus if there is a good match between the educator's personality and learner's needs, but this, however is not always possible. This human factor is prevalent in teaching and learning in general.

All educators offered the learners with Asperger Syndrome some learning support in the classroom. This will be discussed in the next category, classroom-related factors.

Classroom –related factors

Change is one aspect the learner with Asperger Syndrome struggles to cope with. Most learners find the transition from primary to secondary school very traumatic, because of the classroom-related factors. Different educators, who are aware of the barriers to learning and the learners' need for support to follow the lesson, teach the various subjects. During my observation, I noted that they adapted their teaching styles to support these learners in their classrooms. Most of the educators used multi-sensory teaching styles to stimulate effective learning. Learners were encouraged to listen, look and feel in most lessons. Some of the learners with Asperger Syndrome need a support assistant to ensure that they sustain focus and also focus on the necessary facts. Educators made adaptations to their teaching to accommodate these learners. Some educators developed special writing frames for the learners in science, and less creative writing was expected in English. All learners received homework and a realistic handing-in date was decided for learners with Asperger Syndrome. As a rule, learners were encouraged to face the teacher and to sit at the front to eliminate distractions. Educators did not need to adapt the curriculum for the learners, because they felt it was not necessary as all the learners were capable of coping with the existing curriculum.

Social integration in the classroom was reported to be good. All educators said that the learners were part of the class in most aspects. They were part of small groups and were not 'treated differently'. Most normal developing learners were aware of the difficulties the learners with Asperger Syndrome experience and were very supportive.

Specialist provision factors

The specialist centre is part of the mainstream school and provides support to the learners with Asperger Syndrome. All the learners register at the centre in the mornings and they receive support in organising their day. Learners can access the centre during the day, when they experience anxiety or any difficulty in the mainstream. All learners attend a minimum of three to four lessons in the specialist centre per week, where they receive specialist lessons in social communication, socialising skills and academic help. The specialist teacher in the centre observes the learners on a day-to-day basis to establish knowledge of how they are progressing in the inclusive education establishment. Learners are placed on work experience to enhance their performance in the mainstream living environment. The specialist centre provides training and support for educators, parents and professionals. The specialist teacher in the centre aims to support educators, parents, learners and professionals who form part of the centre. This is a collaborative effort to ensure effective inclusion in the school and broader community.

4.6.1 Educators

4.6.1.1 Stage 1: Initial encounter

It seems to be important that the educator should be aware of the learners with Asperger Syndrome in order to provide sufficient support. Three educators were interviewed at various intervals. The first interview was informal, but selected questions were asked (Appendix G). During the follow-up interviews, discussions were held to establish the themes selected for this study.

4.6.1.2 Stage 2: Identification of themes

During the interviews and discussions data were produced. The raw data were transcribed from the informal and formal notes taken during interviews, discussions, observations and personal records were then transcribed; various themes emerged (See Addendum G):

1. Learners with additional disabilities can create barriers to teaching, and teachers need extra training to ensure they can offer the learner the best education for his/her needs. "I won't mind teaching these learners, but I'll need training to help me in this process (E2)."

2. Educators play a very important role in developing the learner's self-esteem, especially learners with Asperger Syndrome. "I think these learners will need more support than 'normal' learners, because they might have a low self-esteem and will need someone to 'boost' them a bit (E1)."
3. Educators need to provide learners with coping mechanisms and give support in using these mechanisms in the mainstream educational environment. "I would imagine these learners needing some sort of 'coping mechanism', and us as teachers needing to help them use these mechanisms to help them cope in mainstream education (E1)."
4. Educators need to arrange the curriculum in such a way to provide academic achievements for these learners. It is important to focus on achievements, rather than failures. "I would like to see these learners achieve in some way or another in school, it will depend on me as educator to help them achieve academically (E3)."
5. Educators play an important role in providing the learners with the necessary social skills needed for friendships. "If forming friendships is a problem, then I feel educators will be expected to step in and give guidance in the necessary skills (E1)."
6. Educators need to understand the obsessions of learners with Asperger Syndrome. These obsessions should not be discouraged and rather be used as a tool for learning. "Obsessions can sometimes be good and should be used to the learner's advantage (E2)."
7. Educators need to adapt their communication skills to provide adequate understanding for learners with Asperger Syndrome. "I think as educators we will have to look at the way we talk and ensure that all learners understand what we want to say in lessons (E3)."
8. Educators should have a reasonable academic expectation of learners with Asperger Syndrome. The curriculum should be tailored to accommodate these learners and provide for their needs. "Adapting a curriculum is already part of education and inclusion of learners, I can not see it being any different for children with Asperger Syndrome (E1)."

9. Physical facilities might need to be altered to accommodate these learners. Very few learners with Asperger Syndrome will need an altered physical environment, but they might need to access 'safe haven' rooms when stressed. "In our school the learners with Asperger Syndrome access 'safe haven' rooms, where they can retreat to when they feel stressed or anxious (E3)."
10. Educators will need to ensure that they understand the administration of specialist provision for learners with Asperger Syndrome, with regards to regular contact home, special statements, reports from therapists, etc. "We receive quite a lot of documents related to these learners, most of which are passed on to the specialist centre or SENCO (E3)."
11. Educators need to understand inclusion and adapt a positive attitude towards inclusion. "Inclusion is not a concept all educators understand, especially older educators like myself. I sometimes feel the need for further training in this field (E2)."
12. Educators need to update their knowledge about Asperger Syndrome and ensure that they have sufficient training in dealing with related problems. "I think the school and LEA can do more to educate and train us teachers (E2)."
13. Educators need to form support groups and communicate their ideas, problems, anxieties, education and training to their colleagues. "The specialist centre provides an awful lot of support, but I still feel the need to communicate with my colleagues about my teaching and inclusion of these learners (E1)."
14. Educators need to provide sufficient support to learners with Asperger Syndrome and learn how to deal with extra support in their classrooms. "I found it very hard to cope with extra support in the beginning, but do not know what I'll do without it now (E2)."
15. Adaptation of the curriculum will depend on the individual education plan of each and every learner's needs. "I need to know the learner's needs to be able to provide an adaptable curriculum. Contact with the specialist centre has helped considerably (E3)."

16. Working in close relationship with the specialist centre is essential to ensure effective support and inclusion for each learner. "Contact with the specialist centre has helped considerably (E3)."
17. Educators need to encourage peer relationships and educate good socialising and communication skills. "I never thought I will be teaching these skills, but I can now see that there is a desperate need for me to do so (E2)."
18. Educators need to be aware of effective induction and intervention programmes and be willing to use them. "I use intervention programmes as part of my teaching with all learners, I might have to adapt some of it, but I am sure it will not be any major changes (E3)."
19. Educators need to have a good knowledge of each learner's background, history, socio-economic status and family composition. "All files are freely available for teachers and this provides valuable information to us (E3)."
20. Educators need to be aware of support structures for the learner at home and advice on possible support for parents and learners. "I am not aware of any support in our area, but would like to find out (E1)."
21. Educators need to have good communication with parents and encourage them to be involved with their child's education plan. "I need the parents to help me understand the child's needs. I expect parents to be involved and to support academic work (E1)."
22. Educators need to be supportive and provide advice where needed. "Educators fulfil a supportive role, especially in the town where we live (E2)."
23. Educators need to be aware of available funding and make use of this funding to contribute effective education and resources. "I'm sure there is funding available, I am just not aware how to access it. It will be very helpful to provide adequate resources to these learners (E3)."
24. Educators need to know of the support the LEA can provide. "The LEA provides support to the school, but I'm sure they have structures that support teachers, parents and learners (E1)."
25. Educators need to be aware of external support and be able to advise parents and other agencies involved to access support if needed. . "The LEA provides

support to the school, but I'm sure they have structures that support teachers, parents and learners (E1)."

26. Educators need to be consistent in giving support to learners. "I believe consistency is the key to effective support (E2)."
27. Educators need to co-ordinate any support assistants in their class and ensure that they provide effective support to learners. "I find it hard to co-ordinate LSA's, but I know it is important that I do this to ensure that all learners receive adequate support (E1)."
28. Educators can access the specialist support for information and guidance. "I find the specialist centre very helpful and it has given me some valuable advice (E2)."
29. Educators need to observe support and evaluate support given to learners. "As a teacher I am expected to observe learners and the support given to them (E3)."
30. Educators work with the specialist teacher to provide optimal support to learners. "I find the specialist centre very helpful and it has given me some valuable advice (E2)."

4.6.1.3 Stage 3: Clustering of themes

Some of the themes or items identified in Stage 2 share reference points and can be grouped into clusters. Following a list of the five main clusters that represent groupings of items (See Addendum G):

- Cluster 1: Child-related factors (C) 1-7
- Cluster 2: School-related factors (S) 8-18
- Cluster 3: Family factors (FF) 19-22
- Cluster 4: Factors related to the education department (D) 23-24
- Cluster 5: Support (LS) 25-30

4.6.1.4 Stage 4: Summary of topics

From each cluster some topics emerged in the interviews/discussions. During interviews/discussions with the three educators the following topics emerged (see Addendum B):

Cluster 1: Child-related factors (topics 1-7)

- Additional disabilities
- Self-esteem in the mainstream
- Coping mechanisms
- Academic achievements
- Socialising skills (friendships)
- Obsessions
- Communication.

Cluster 2: School-related factors (topics 8-18)

- Achievement in mainstream
- Physical facilities in school
- School administration
- Attitude of school towards inclusion
- Teachers' attitudes to inclusion
- Knowledge about problems
- Collegial relationships
- Teachers' personalities
- Classroom support
- Curriculum
- Specialist centre
- Peer relationships
- Induction programme;
- Intervention programmes.

Cluster 3: Family factors (topics 19-22)

- Achievement enhancing factors
- Socio-economic factors
- Family structure
- Support to pupils
- Involvement with school
- Problems at home.

Cluster 4: Education Department (23-24)

- Funding;
- Support;

- Curriculum.

Cluster 5: Support (25-30)

- External support
- Consistency of support
- Co-ordination of support
- Classroom support (mainstream)
- Specialist centre support;
- Early intervention
- Observation of support
- Pupil reaction to support
- Specialist support teacher.

4.7 PARENT-/FAMILY-RELATED FINDINGS

The categories clustered under this pattern are family composition/structure, achievement-supporting factors and socio-economic status, support to learners, involvement with school and problems at home (if any).

4.7.1 Parents

Learner 1 (L1):

This learner is from a good middle-class family and he is one of three siblings. He recently learnt that his parents are getting divorced and will both re-marry new partners in the New Year. This learner might move to another part of Wales next year. All this change has caused some major problems with this learner's behaviour which will hopefully be resolved once he has settled into his new school. The father is very involved, as he is a teacher at the school. The parents are both supportive of the learner's individual needs.

Learner 2 (L2):

This learner is from a middle-class family. He lives with his mother and does not have any contact with his father. Social services were recently contacted to spend some time helping this family as they were struggling to cope. Parental neglect was later reported. The mother is not very supportive and expects this learner, with very low-functioning autism, to be independent. This parent is not very involved at school and rarely attends parent meetings.

Learner 3 (L3):

This learner is from a lower-middle-class family. He lives with his mother and has very little contact with his father, who has remarried with a new family. The mother supports the learner and is very involved in his life. This learner can function independently and is encouraged to do so by the mother. The mother is not very involved at school and only attends meetings if asked to. This learner was recently diagnosed with an eating disorder, which stems from the mother having eating disorders such as anorexia.

Learner 4 (L4):

This learner is from a middle-class family. He is part of a very stable family structure and both parents are involved in his day-to-day life. The parents are very supportive at home and in school. I've met with this family on a regular basis and good communication enables good support for both learner and family.

Learner 5 (L5):

This learner is from a middle-class family. He lives with his father and visits his mother over weekends. Both parents are involved in this learner's education plan and visit the school on a regular basis. Parents recently went through a custody battle and the learner was left with very difficult decisions. Social services are keeping an eye on the progress of this battle.

Learner 6 (L6):

This learner is from a middle-class family. He lives with both parents and his sister. This is a very stable family and both parents are involved in this learner's education plan. I meet with these parents on a regular basis and excellent communication lines have been established.

4.7.1.1 Stage 1: Initial encounter

Parents were interviewed at informal meetings held once a term at the school. Parents have expectations of what they wanted for their children and provided me with important information regarding their expectations from the school, educators, LEA and professionals. Parents were interviewed during informal, semi-structured interviews. Two sets of interviews were held and were followed with discussion sessions. See Appendices F1 and F2 for interview questions. During these interviews

and discussions, themes or topics were selected and five main themes were chosen. These themes formed part of the research method used in this study.

4.7.1.2 Stage 2: Identification of themes

During the informal interviews and discussions the raw data from the informal note taking was transcribed into various themes/items:

1. Various parents noted that their children suffer from a lack of confidence and therefore have low self-esteem. "... needs to develop his self-esteem and confidence ... (P3)." "... has a very low self-image and it is affecting his self-esteem (P6)."
2. Parents were concerned about academic achievement and wanted their children to do well in mainstream education. "My child will need good grades to enter a college or university (P3)." "It is important for (C1) to have a job when he leaves school (P1)". "Why else would we want (C4) to go to mainstream education, of course he needs good grades (P4)".
3. Parents wanted their children to develop solid friendships and to learn the necessary socialising skills. "My child has been struggling with friendships and socialising all his life, we would like to see him developing friendships (P5)".
4. Most parents were concerned that their children's developmental delay in communication skills will cause problems for them in the mainstream. "I don't know if he will be able to cope with the demands of communication and language in the mainstream (P1)."
5. Most parents were satisfied with the effort the school and LEA had made to include their children in the mainstream education. "I'm pleased to say that this school has made a tremendous effort to include our son into the mainstream school, a large amount of money has been spent in making this possible (P6)." "I don't know what we would have done if we did not have this school and the support we are getting from the LEA (P2, P4)".
6. Parents were satisfied with teacher training and the support they received from the teachers. "It is reassuring that teachers know what Asperger Syndrome is and how to deal with it in the mainstream education (P2)."
7. Parents were all involved in choosing an appropriate curriculum for their children to accommodate their needs. "As parents we feel very involved (P1)."

"We were part of his education plan from the beginning (P5)". "We can support him, because we are part of his education plan (P6)."

8. Parents feel the specialist centre is the reason for the successful inclusion of their children into the mainstream secondary school. "We did not have such a centre in his previous secondary school, he did not have the opportunity to develop as he did in this school (P3)". "This centre is the reason my son has been achieving in the mainstream (P1)."
9. Parents acknowledged that the funding from the Local Education Authority paid a key role in establishing the specialist centre. "The LEA is to thank for all the funding they provided to establish and manage this centre (P4)".
10. Parents noted that support assistants play a key role in their children's successful inclusion. "My son will not be able to function as he does, without support in his lessons (P1)." "Support is very important, without it (C4) would have been in a special school (P4)".
11. Parents could see a difference in their children after entering the specialist centre. "Our son makes more eye-contact and communicates with his peers, something he did not do before he went into the centre (P5)." "It is a pleasure to interact with our son, because he uses the social communication skills learnt in the centre (P3)".

4.7.1.3 Stage 3: Clustering of themes

Some of the themes or items identified in stage two share reference points and can be grouped into clusters. The following a list of some of the main clusters that represent groupings of items:

- Cluster 1: Child-related factors (C) 1-4
- Cluster 2: School-related factors (S) 5-8
- Cluster 3: Factors related to the education department (D) 9
- Cluster 4: Support (LS) 10-11

4.7.1.4 Stage 4: Summary of topics

From each cluster some topics emerged in the interviews/discussions. During interviews/discussions with the parents the following topics emerged (see Addendum B):

- Cluster 1: Child-related factors (topics 1-4)

- Self-esteem
- Coping mechanisms
- Academic achievements
- Socialising skills (friendships)
- Communication.

Cluster 2: School-related factors (topics 5-8)

- Achievement in mainstream
- Attitude of school towards inclusion
- Teachers' attitudes to inclusion
- Knowledge about problems
- Classroom support
- Curriculum
- Specialist centre
- Peer relationships.

Cluster 3: Education Department (topic 9)

- Funding
- Support.

Cluster 4: Support (topics 10-11)

- Consistency of support
- Co-ordination of support
- Classroom support
- Specialist centre support
- Pupil reaction to support.

4.8 CHILD-/LEARNER-RELATED FINDINGS

4.8.1 Learners

Data were produced during discussions and observations of the learners (C), discussions with the parents and field notes as well as from the school and medical records.

The learners taken into the centre have all been diagnosed with Asperger Syndrome. The only way they can access the specialist centre is with this diagnosis and a special needs statement. The learners vary in age from 11 to 16 years. All the learners are boys. Fifty per cent of the learners have additional disabilities such as,

ADHD/ADD, Hydrocephalous and emotional behavioural problems. The learners vary considerably and fall in different areas on the Autism Spectrum. It is thus very important that they have an individualised education plan tailored for each one of them by the educators involved. All the learners with Asperger Syndrome have attended the mainstream secondary school since they left their primary schools. In Wales secondary school education starts at 11 years of age. All the learners had already been diagnosed before they entered the secondary school and were taken into the specialist centre as soon as it was opened (January 2003).

Four of the learners in the specialist centre started their mainstream secondary education without support from a specialist centre. The centre was developed a year after they entered the secondary school. Their behaviour and profound learning difficulties caused them to be excluded from school numerous times and they were very hard to control in most mainstream lessons. They were on the school's 'problem-child' list and very few of the staff had the necessary skills to help them with the inclusion process. When the specialist centre was opened, these learners received the necessary support they needed, and the staff were trained to support them in the mainstream. They had not yet been excluded and their behaviour improved dramatically. All of these learners are top achievers in their individual classes and show appropriate social interaction skills.

INDIVIDUAL PROFILES

Learner 1 (L1):

This learner was taken into the centre after he was in the mainstream for a year. This learner has severe ADHD and has been on a very high dosage of Ritalin for nine years of his life. I recently encouraged the parents to take the pupils off Ritalin and to follow a gluten-casein free diet. This learner shows very poor socialising and communication skills. He was diagnosed with Asperger Syndrome when he was 5 years old and is well aware of his complex problems. This learner's education plan has been altered in such a way to give him specialised support lessons in the specialist centre to improve his socialising and communication skills. He has a one-to-one support assistant in all his mainstream lessons and special arrangements are made for him during tests and exams. This learner's parents recently got divorced and there is quite a large amount of disruption at home with shared parental support. The change in his home environment has caused major behavioural disruptions and

the learner is accessing the centre more than his usual hours per week. The specialist centre is currently supporting this learner to cope with the change at home and gives guidance to both parents to cope with a child with Asperger Syndrome in a divorce situation.

This learner has benefited enormously from the specialist centre. In total this learner can cope better with socialising and communication situations and he has improved academically from a total failure to a D. I believe that this learner will improve even more with the provision made available to him.

Learner 2 (L2):

This learner was taken into the specialist centre after he was in the mainstream for two years. During this time the learner was regularly excluded and he struggled to cope with the mainstream environment. There was talk of moving this learner to a special needs school, where his autism would be catered for. This learner was diagnosed with Asperger Syndrome when he was 4 years old. This learner has ADHD and takes a low dosage of Ritalin. This is the oldest learner in the centre and he is currently completing his GCSEs (Grades 10-13 in South Africa). This is a very high level of achievement for a learner so low on the Autism Spectrum. This learner responds well to support and has been one of our success stories. His academic marks are still low, but he has greatly improved. He can now sit in an exam and complete the papers without one-to-one support. This learner is supported in all his lessons and does most of the work independently. This learner still shows inappropriate social and communication skills, but he has improved since he was introduced to the specialist centre a year ago. We are currently focusing on post-16 provision for this learner and we are looking at further education colleges for him.

Learner 3 (L3):

This learner was the actual reason the specialist centre was opened. This learner was diagnosed with Asperger Syndrome when he was 4 years old. He was also diagnosed with Hydrocephalous at a very young age. He was a very confused learner before the specialist centre opened and was excluded from school for three days a week. He was only allowed two days school per week, due to his bad behaviour and disruptive nature. He failed most tests and refused to sit exams. This learner had one-to-one support in all his lessons, but refused to do any work independently. This learner achieved amazing results with the support from the

specialist centre. At least five lessons a week were dedicated to social communication learning and time was allocated to do homework in school. After only six months in the specialist centre there was a major change in this learner's attitude. This learner is now a full-time student in the school and does not need any support in any of his lessons any longer. He has been fully included into the mainstream education system and boasts top grades and possible entry into a university in the near future. This is a learner with excellent friendships and lasting relationships. This learner is the success story of the specialist support centre and it is clear that this support has been of great benefit to this learner.

Learner 4 (L4):

This learner was only recently diagnosed with Asperger Syndrome. He had, however, been accessing the specialist centre since January 2003. This learner was not supported in any lessons in the mainstream and experienced major difficulties with organising skills. Coping with anxiety was one of this learner's biggest problems and caused many problems in his day-to-day social life. Since this learner started to receive support in the mainstream, a major change has occurred in his attitude and academic performance. This learner attends special communication and behaviour lesson in the specialist centre and is allowed time out in the centre during spells of anxiety. Overall this learner is showing a more mature, relaxed and focused attitude and responds very well to the specialist support given to him in the mainstream school.

Learner 5 (L5):

This is a very young learner and he started his secondary education only nine months ago. This learner was diagnosed with Asperger Syndrome when he was 5 years old. This learner was excluded permanently from his primary school and had a very bad experience in this school due to a lack of understanding of his needs. When this learner was taken into the secondary school, he was observed in most lessons. He was included into the specialist provision in September 2003. Up to now he has shown miraculous progress and is achieving above average in his schoolwork. This learner will be fully included into the mainstream from September 2004, supported by a one-to-one support worker.

Learner 6 (L6):

This learner was diagnosed with Asperger Syndrome when he was 4 years old. This diagnosis was confirmed three months ago in a second diagnostic assessment. This learner came into the secondary school from another secondary school in September 2003. He was brought to our school, because of the specialist provision and the hope that it might help him. This learner had a very bad experience in mainstream education and performed below the pass level in all his subjects. His reading age was well below his actual age and he had no intention of attending school or participating in lessons. His speech was impaired and he needed regular speech therapy sessions. During the past nine months this learner has been completely transformed. This learner is fully included in the mainstream with support, and he just completed his external examinations with success. His speech has improved and his reading age and his own age are the same. This learner will be fully included in the mainstream next year and he will continue to be supported by the specialist centre and a special support assistant.

4.8.1.1 Stage 1: Initial encounter

All learners were fully included in the specialist centre and mainstream education. This inclusion was supported by the specialist centre and support assistants at all times. Learners had special education plans, enabling them to attend lessons in the specialist centre. These lessons consisted of social skills training and development of social communication skills. During these lessons learners were observed and participated in discussion groups. Learners also completed various questionnaires and activities during lessons that contributed valuable information to this study.

4.8.1.2 Stage 2: Identification of themes

During informal discussions and the completion of various questionnaires and activities in lesson times data were produced and the informal notes were then transcribed into various themes/items:

1. All learners were aware of their condition (having Asperger Syndrome), but not all knew how it affects them. "I have heard that I have Asperger Syndrome, but I do not know how to put it in words (C2)". "I know what I have, but I can not explain it to anyone (C5)".

2. Learners were generally secretive about their condition and did not want their friends to know. "I don't think my friends will understand (C3)." "My friends might treat me differently (C5)."
3. Learners had some coping mechanisms for their problems, but generally tried to ignore situations where they felt anxious or threatened. "I don't enjoy parties, and won't go to any (C4)". "I don't always understand why people laugh at me, I guess I have a good sense of humour (C6)".
4. All learners said that they wanted friends and found it hard to make friends. "I have one good friend, but I won't mind having more (C1)". "I find it hard to understand my friends, and sometimes I'm not sure if they really are my friends (C 4)".
5. Most learners were aware of their obsessions and did not mind sharing them with you.
6. All the learners were concerned about achievement and wanted to achieve well in school. "I want good grades, because I want a good job (C 1)". "I want to be in top sets, and therefore I have to work hard (C 5)".
7. None of the learners knew what inclusion was.
8. Learners mentioned that some teachers were supportive, but they found that most teachers put a lot of pressure on them to keep up the pace in lessons. "I find it hard to keep up in lessons (C3)". "I need my support to help me cope with the workload (C4)".
9. All learners had an adapted curriculum and preferred this to a normal curriculum. "I do not enjoy Physical Education and prefer lessons in the specialist centre to going to Physical Education (C2)". "I find music very stressful and am glad to complete work in the specialist centre (C5)".
10. Learners rarely talked about their families, but some did mention the composition and who they liked in their families. "I have one brother and one sister, but I rather play with my brother (C2)".
11. Learners were very aware of their parents' involvement in their education and support. "My mother fills in my home-school book every day (C1)". "My parents visit the school at least twice every term (C4)".

12. Learners were not aware of the local education department's role in their education.
13. Most learners were dependent on support in their mainstream lessons. "I have a support assistant in all my lessons (C1)". "I need my support in maths, because the work is very stressful (C4)".
14. The learners had a very positive attitude towards the specialist centre. "My life changed when the centre was opened in our school (C1)". "I need the centre to help me cope in the mainstream school (C4)". "School is more pleasant since the centre was opened (C3)".

4.8.1.3 Stage 3: Clustering of Themes

Some of the themes or items identified through the data production in stage two share reference points and can be grouped into clusters. The following a list of the main clusters that represent grouping of items:

- Cluster 1: Child-related factors (C) 1-5
- Cluster 2: School-related factors (S) 6-9
- Cluster 3: Family Factors (FF) 10-11
- Cluster 4: Support (LS) 13-14

4.8.1.4 Stage 4: Summary of topics

From each cluster some topics emerged in the discussions. During discussions with the learners the following topics emerged (see Addendum B):

Cluster 1: Child-related factors (C) 1-5

- Self-esteem in the mainstream
- Coping mechanisms
- Academic achievements
- Socialising skills (friendships)
- Obsessions.

Cluster 2: School-related factors (S) 6-9

- Achievement in mainstream
- Teachers' attitudes to inclusion
- Classroom support

- Curriculum
- Specialist Centre
- Peer relationships.

Cluster 3: Family factors (FF) 10-11

- Family structure
- Support from family for pupils
- Involvement with school.

Cluster 4: Support (LS) 13-14

- Classroom support
- Specialist centre support
- Pupil reaction to support
- Specialist support teacher.

4.9 FACTORS RELATING TO THE EDUCATION DEPARTMENT

The specialist centre is administered by the local education authority (LEA), which is responsible for enacting national policy. The education department is, amongst other things, responsible for funding. At present schools and centres for special needs are funded separately and according to a more favourable formula than mainstream schools. The school under discussion in this study received less favourable allocation for the specialist centre but this is currently being addressed in the national policy which is being rewritten.

The local education authority has, however, given excellent in-service training and equipped all the educators with the necessary knowledge to ensure good practice for inclusive education.

4.10 PROFESSIONALS-RELATED FINDINGS

4.10.1 Stage 1: Initial encounter

During the course of this study informal interviews and discussions were held with various professionals involved in the specialist centre. Professionals such as the school nurse, physiotherapists, speech therapist and education psychologist were regularly contacted and meetings were held once a term to obtain support and

valuable information. During the interviews and discussions themes were selected for this study. These themes formed part of the research method used in this study.

4.10.2 Stage 2: Identification of themes

1. All professionals felt that the learners should be seen as a whole and that their additional disabilities should also be taken into account when planning their individual education in the mainstream school. "Look at the full picture and then decide what is best for the learner (EdP)".
2. It was important to help development of a healthy self-esteem for each individual learner. This should be encouraged by each educator involved. "These children need to feel safe in their school environment to improve their self esteem (SN)". "The more teachers know the better part they can play in self-esteem development (SENCO)".
3. It was important to educate learners in coping mechanisms. "The specialist centre should provide sufficient education in coping mechanisms (EdP)".
4. Friendship skills should be taught and this should happen in the specialist centre. "This is one of the functions of the specialist centre, to teach friendship skills (EdP)".
5. Communication skills were problems and should be addressed in the specialist centre and then furthered in the mainstream education. "I can only do so much, the rest of the work should happen in school and the specialist centre (ST)".
6. It was important to encourage achievement in mainstream education, but it should not be causing any stress or anxiety. "School can be stressful for these children and therefore we need to encourage them to enjoy it, rather than push for excellent grades (SENCO)".
7. The physical facilities in the school should be accessible to all the learners. "Some areas may be hazardous to children with Asperger Syndrome, because of poor motor co-ordination (Ph)".
8. Administration for the specialist centre should be done by the school and specialist support staff of the centre. "You, the specialist teacher, are responsible for the day-to-day administration of the centre (SENCO)".

9. Regular training and good communication between the specialist centre and the educators would improve inclusion. "The specialist teacher needs to communicate the needs of the children to the teachers in morning meetings (EdP)".
10. Adaptation of the curriculum for each learner was essential. "Each child is individual and therefore needs an individual education plan (SENCO)".
11. The specialist teacher should be responsible for the induction and intervention programmes for the learners in the specialist centre. "I can recommend programmes, but it depends on the needs of the children and the specialist teacher will have to address these needs in combining these programmes (EdP)".
12. The family's socio-economic status could influence the support the learners receive. "In this case it is the parents who are causing us more problems than the student (SN)".
13. Parental involvement was essential for successful inclusion. "You can see how parent involvement plays an important role, because you can spot the success in those learners (EdP)". "These parents are very involved and therefore you should not have any problems when it comes to support (SENCO)".
14. Funding from the LEA was essential to establish a specialist centre. "The LEA will provide the school with a set-up fund, but the school will have to provide continuing funding for the centre (LEA)".
15. External support agencies should be involved in the specialist centre and provide regular meetings and support groups for parents, educators and learners. "In our area we have the National Autistic Society and Autism Cymru, who will support the centre (EdP)".
16. Support in the specialist centre would be co-ordinated by the specialist teacher and other support will be co-ordinated by the SENCO (LEA).
17. The specialist teacher would observe support and report back to the education psychologist each term basis. "Can you provide me with information regarding support for the learners in your centre? (EdP)".

4.10.3 Stage 3: Clustering of themes

Some of the themes or items identified during formal and informal meetings or discussions with professionals in Stage 2 share reference points and can be grouped into clusters. The following a list of the main clusters that represent groupings of items:

Cluster 1: Child-related factors (C) 1-5

Cluster 2: School-related factors (S) 6-11

Cluster 3: Family factors (FF) 12-13

Cluster 4: Factors related to the education department (D) 14-15

Cluster 5: Support (LS) 16-18

4.10.4 Stage 4: Summary of topics

From each cluster some topics emerged in the meetings and discussions. During meetings and discussions with the professionals the following topics emerged (see Addendum B):

Cluster 1: Child-related factors (C) 1-5

- Additional disabilities
- Self-esteem in the mainstream
- Coping mechanisms
- Academic achievements
- Socialising skills (friendships)
- Obsessions
- Communication.

Cluster 2: School-related factors (S) 6-11

- Achievement in mainstream
- Physical facilities in school
- Administration
- Teacher's attitude towards inclusion
- Knowledge of problems
- Classroom support
- Curriculum

- Specialist centre
- Induction programmes
- Intervention programmes.

Cluster 3: Family factors (FF) 12-13

- Socio-economic factors
- Family structure
- Support to pupil
- Involvement with school
- Problems at home.

Cluster 4: Factors related to the education department (D) 14-15

- Funding
- Support.

Cluster 5: Support (LS) 16-18

- External support
- Consistency of support
- Co-ordination of support
- Classroom support
- Specialist centre support
- Observation of support
- Pupil reaction to support
- Specialist support teacher.

4.11 PERSONAL RECORDS

4.11.1 Stage 1: Initial encounter

As the specialist teacher of the specialist centre I have immediate access to the learner's school records. Important information was gained from these records, such as: history of diagnosis, history of education process, all the past individual education plans, letters from parents and other professionals working with the learners, statements from the local education authority about the learner's condition and education vision, behaviour plans and interventions, speech language programmes and interventions, previous teacher's reviews and reports, academic

reports, annual review reports and minutes and examples of work done by the learner. As part of my position at the school I was expected to add to these files and to keep the records up to date.

4.11.2 Stage 2: Identification of themes

The following information was obtained from the data in the personal records (due to the school policy on personal records, namely that none of these records are allowed to leave the school building, none of these records are included as Addenda in this study):

1. Previous school reports (academic achievement)
2. Individual education plans
3. Teachers' reports
4. Professionals' reports/letters
5. History of diagnosis
6. History of education
7. Letters from parents and other professionals working with the learners
8. Statements from the local education authority about the learner's condition and education
9. Behaviour plans and interventions
10. Speech language programmes and interventions
11. Previous teachers' reviews
12. Academic reports
13. Annual review reports and minutes
14. Examples of work done by the learners.

4.11.3 Stage 3: Clustering of themes

Some of the themes or items identified while studying the personal records of the learners involved in Stage 2 share reference points and can be grouped into clusters. The following is a list of the main clusters that represent groupings of items:

Cluster 1: Child-related factors (C) 2, 5, 12, 14

Cluster 2: School-related factors (S) 1, 3, 6, 9, 11, 13

Cluster 3: Family factors (FF) 7

Cluster 4: Factors related to the education department (D) 4, 8

Cluster 5: Support (LS) 7, 10

4.11.4 Stage 4: Summary of topics

From each cluster some topics emerged. During the review of personal records the following topics emerged (see Addendum B):

Cluster 1: Child-related factors (C) 2, 5, 12, 14

- Individual education plans, produced by the school for each learner's individual needs
- History of diagnosis, produced by parents, teachers and professionals
- Academic reports showing the learner's academic progress in his education
- Examples of work done by the learner.

Cluster 2: School-related factors (S) 1, 3, 6, 9, 11, 13

- Previous school reports (academic achievement)
- Teachers' reports stating learner's achievement, progress and behaviour in school
- History of education throughout school career
- Behaviour plans and interventions produced by educators and professionals
- Previous teachers' reviews held with parents, learners and professionals
- Annual review reports and minutes of meetings held with parents, learners and professionals.

Cluster 3: Family factors (F.F) 7

- Letters from parents and other professionals working with the learners.

Cluster 4: Factors related to the education department (D) 4, 8

- Professional's reports/letters
- Statements from the local education authority about the learner's condition and education.

Cluster 5: Support (LS) 7, 10

- Letters from parents and other professionals working with the learners

- Speech language programmes and interventions.

4.12 OBSERVATION AND FIELD NOTES

Informal field notes were made during the observation sessions, which took place over a period of one year. These observations took place in the mainstream classroom, specialist centre and leisure times (see Addendum I for an example of the observation document used by the specialist teacher).

4.12.1 Stage 1: Initial encounter

Information pertaining to the physical facilities, the activities of the educators and learners and atmosphere of the school was noted. In the classroom the position of the learner, the physical state of the classroom, the position of the other learners, the learner's learning/working style, the interaction with the educators, the learner's participation in the lessons as well as the interaction with peers were monitored.

Special support assistants had daily report books (see Addendum J), where they had to note their observations while working with the learners in the mainstream lessons. These report books were used as field notes to obtain objective information from the learner's behaviour and academic progress in the mainstream.

Informal field notes were made on these daily report books (Addendum J) by myself in the specialist centre, observing the learners during specialist lessons and break and lunch times.

4.12.2 Stage 2: Identification of themes

This section is a summary of the clusters that were produced when information was taken from the observational notes made by the support assistants.

1. Information pertaining to the physical facilities
2. The activities of the educators and learners
3. The atmosphere of the school
4. The position of the learners in the classrooms
5. The physical state of the classrooms
6. The position of the other learners
7. The learner's individual learning/working style

8. The interaction with the educators
9. The learner's participation in the lessons
10. The learner's interaction with peers
11. Daily report books from support assistants where they had to note their observations while working with the learners in the mainstream lessons. These report books were used as field notes to obtain objective information from the learner's behaviour and academic progress in the mainstream
12. Daily reports made by me in the centre, based on observing the learners during specialist lessons and communication sessions during leisure time
13. Notes taken while observing professionals working with learners
14. Observational notes while attending lessons in the mainstream to determine teaching styles that work and learner's reaction to various lessons and teachers
15. Observational notes while observing parent-child interaction.

4.12.3 Stage 3: Clustering of themes

Some of the themes or items identified from the data produced by the support staff in stage two share reference points and can be grouped into clusters. The following is a list of the main clusters that represent groupings of items:

- Cluster 1: Child-related factors (C) 2, 7, 8, 9, 10
- Cluster 2: School-related factors (S) 1, 2, 3, 4, 5, 6, 14
- Cluster 3: Family factors (FF) 15
- Cluster 4: Factors related to the education department (D) 13
- Cluster 5: Support (LS) 11, 12

4.12.4 Stage 4: Summary of topics

From each cluster some topics emerged. During the review of observational notes the following topics emerged (See Addendum B):

- Cluster 1: Child-related factors (C) 2, 7, 8, 9, 10
 - The activities of the educators and learners
 - The learner's individual learning/working style

- The interaction with the educators
- The learner's participation in the lessons
- The learner's interaction with peers.

Cluster 2: School-related factors (S) 1, 2, 3, 4, 5, 6, 14

- Information pertaining to the physical facilities
- The activities of the educators and learners
- The atmosphere of the school
- The position of the learners in the classrooms
- The physical state of the classrooms
- The position of the other learners
- Observational notes while attending lessons in the mainstream to determine teaching styles that work and learner's reaction to various lessons and educators.

Cluster 3: Family factors (FF) 15

- Observational notes while observing parent-child interaction.

Cluster 4: Factors related to the education department (D) 13

- Notes taken while observing professionals working with learners.

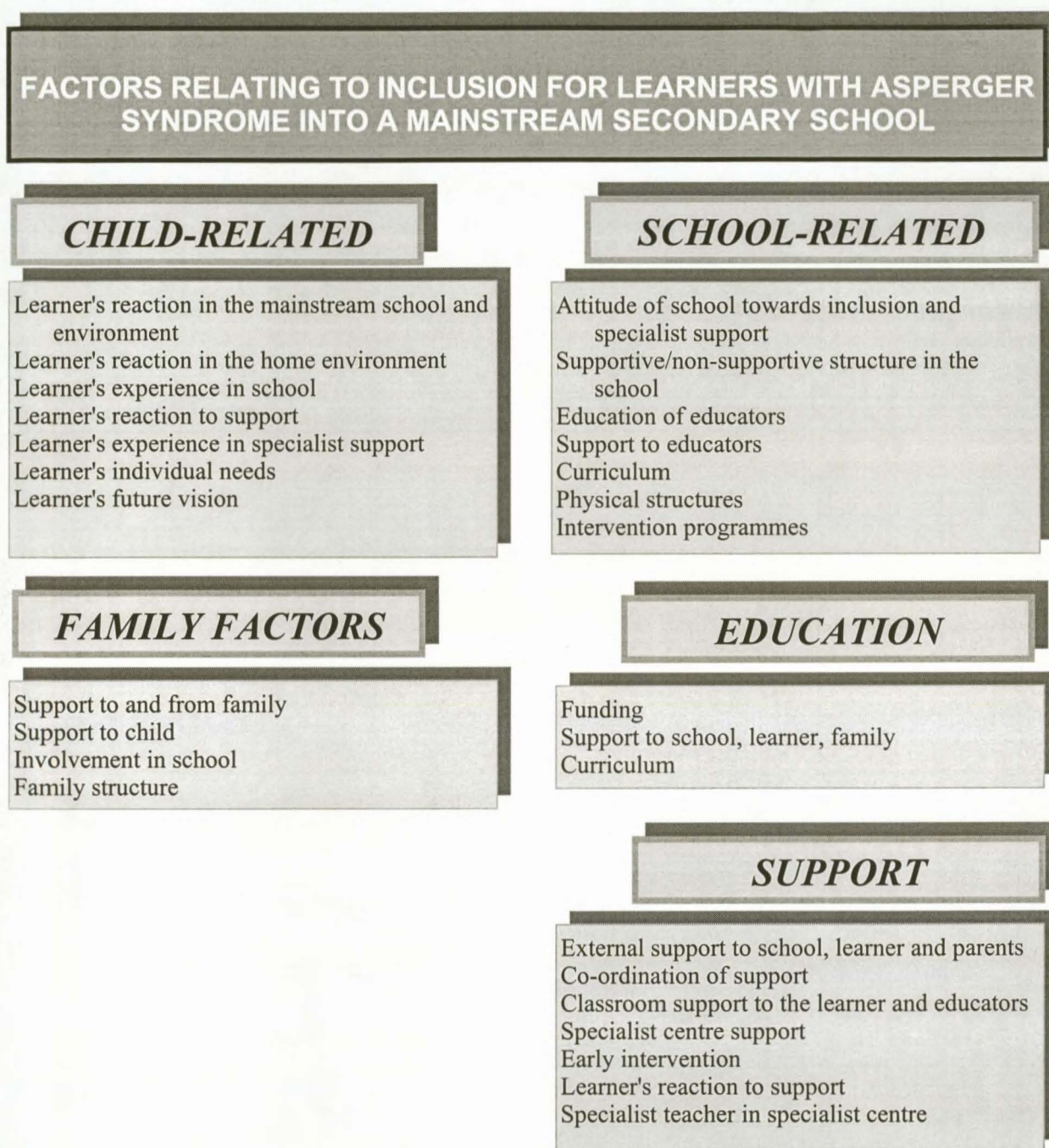
Cluster 5: Support (LS) 11, 12

- Daily report books from support assistants in which they had to note their observations while working with the learners in the mainstream lessons. These report books were used as field notes to obtain objective information on the learner's behaviour and academic progress in the mainstream.
- Daily reports were made by me in the specialist centre, based on observing the learners during specialist lessons and communication sessions during leisure time.

4.13 MAIN THEMES

In this section I present the main themes, with their sub-themes, in a table format. All the themes that emerged from the texts (interviews, field notes, etc.) are presented so that it is easy to determine when a certain theme was raised.

The following is a layout of the thematic structure of the five main themes that were explored:

Figure 4.1: Thematic structure of the five main themes

The layout in Figure 4.1 serves as a summary to indicate the five areas I investigated or the five main themes, into which I grouped the identified sub-themes.

The main themes are collective descriptions of the core content of the sub-themes mentioned under each main theme. The purpose of this was to simplify the presentation of the data and therefore make it more understandable.

Here follows a brief explanation of the five main themes, with their constituent sub-themes:

- ***Child-related factors***

In this area the educators', parents', learners' and professionals' experiences of the learners were noted. The learners' experiences were also taken into account in selecting the main themes. The educators revealed how the learners reacted in the mainstream education and over a period of time a positive change to their experience in the mainstream was noted. Field notes, personal records and observations of each learner indicated a positive change toward inclusion in the mainstream. Each of them showed a remarkable change and positive attitude towards the specialist support and centre in the mainstream school. All the factors mentioned under this theme contributed to the realization that support from the specialist support centre contributed to the successful inclusion of each and every learner in the mainstream secondary school.

- ***School-related factors***

In this area the educators', parents', learners' and professionals' experiences of the school were noted. Educators played the main role in conveying their experiences in the school. Once again all the information gathered from field notes, records, observation and interviews indicated a positive change in the school towards inclusion of learners with Asperger Syndrome. Educators' observations regarding the learners in their school environment helped me to select of the main themes. During the course of this study the educators' attitude towards inclusion, Asperger Syndrome and the specialist teacher changed positively and they conveyed much-needed support for the inclusion of these learners.

- ***Family factors***

In this area the educators', parents', learners' and professionals' experiences of the family structure and home environment of each learner were noted. The main focus was on support from the family, support to the family and support from the family to the learner. Considerable emphasis was placed on parent involvement during the inclusion process and the establishment of a specialist centre. During this study parents gave excellent support to the specialist centre and their children, all contributing to the successful inclusion process.

- ***Education Department***

In this area the educators', parents', learners' and professionals' experiences of the education department were noted. Professionals from the education department played a key role in this investigation and contributed to setting up and maintaining the specialist centre. It was the education department that initiated the specialist centre to support and include learners with Asperger Syndrome. The main themes surrounding the education department included funding, support and curriculum. All three these areas are vital for the successful inclusion of learners with Asperger Syndrome into the mainstream secondary school. Throughout this study, the education department gave valuable support and was one of the contributors to the successful setting up of the specialist centre in the mainstream secondary school.

- ***Support***

In this area the educators', parents', learners' and professionals' experiences of the specialist centre and support were noted. Internal and external support was a key factor in this section and all participants produced valuable information regarding their experience of the support given in the school and out of the school. The main theme was the specialist support centre, support assistants and the co-ordination of this support. During the course of this study it became clear how the specialist support centre was possibly the main focus of all support in the inclusion process. Inclusion of learners with Asperger Syndrome into a mainstream secondary school is a possibility, if the learners have support from a specialist centre.

The main themes of this study were used to determine the successful inclusion for learners with Asperger Syndrome into a mainstream secondary school with the support of a specialist centre.

The information into the five selected main themes indicates that the school and support agencies play a significant role in the inclusion process. All participating parties contributed valuable information towards these five themes and towards identifying why inclusion is possible for learners with the support from the school, professionals, parents and education departments.

As indicated in this study the five main themes contributing to the possible inclusion for learners with Asperger Syndrome are:

- Child-related factors
- School-related factors
- Family factors
- Education Department
- Support.

4.14 SUMMARY

This chapter firstly presented the identified themes from the individual interviews, observation, field notes and interaction with all the parties involved. The themes that were mentioned in the second stage of analysis were presented randomly with no obvious link between the themes. In the third and fourth stages of analysis, the themes were grouped into clusters and then presented under main themes. Each main theme consisted of different themes that share a common idea or experience.

I discussed the process that informed the flow from individual interviews to observations and field notes. Thereafter, the themes from the observations and field notes were presented. The same analytical method as for the individual interviews was utilized to group and present the themes under specific main themes.

Finally, an integration of all the identified themes was presented. All the main themes were lists as five main themes.

In reflecting on this chapter, it became evident that the themes that emerged from the interviews, field notes and observations were a clear indicator of the learners' experience in the mainstream school; this relates to the interpretive approach of this study. Valuable insight was gained into the challenging task of inclusion of learners with Asperger Syndrome into mainstream education, but that support that can make it possible to address this challenge successfully.

In the following chapter I briefly discuss these findings as well as their implication.

CHAPTER 5

IMPLICATIONS, RECOMMENDATIONS AND CONCLUSION

5.1 INTRODUCTION

This chapter summarises the discussion of the findings presented in Chapter Four. This discussion is structured in terms of the five areas of experience, namely:

- Learner's experiences related to inclusion of learners with Asperger Syndrome into mainstream education;
- School's and educator's experiences related to inclusion in mainstream education;
- Family's experiences related to inclusion in mainstream education;
- Education department's experiences related to inclusion in the mainstream education;
- Support provided for inclusion in mainstream education.

Secondly, I relate the findings to the proposed research question and aims. Here I will suggest the possible role of educators, parents and professionals in supporting learners with Asperger Syndrome in mainstream secondary education. This is done within an interpretive approach, where the learners, educators, parents and professionals are viewed as phenomena in the school setting (Terre Blanche *et al.*, 1999:127).

Thirdly, this chapter focuses on the implications of this study, as they affect the learners, educators, parents and professionals who participated in the research. Thereafter, the limitations of the present study are discussed, followed by recommendations and implications for South Africa.

Finally, a few concluding remarks are made, where I also present a final reflection on the process of research as I experienced it.

5.2 DISCUSSION OF FINDINGS

According to Willig (2001:60), discussion of the Interpretative Analysis explores the themes identified in the analysis in relation to existing literature in the field. I follow the structure as I used in Chapter Four for this discussion. The discussion of the main findings of the data analysis will relate these findings to aspects of the literature review in Chapter Two.

The findings of the study will be presented, using the selected patterns of child-related factors, school-related factors, family factors, support-related factors and education department-related factors. Although the findings are presented under headings denoting particular patterns, it must be noted that these patterns do not exist as exclusive entities as there is a reciprocal dynamic influence between patterns as well as categories within patterns.

5.2.1 Implications of the education of learners who have Asperger Syndrome in the mainstream

The implications of educating a learner with Asperger Syndrome in a mainstream education environment are closely related to the learner's needs and the ability of the system to meet those needs in a mainstream class. The needs are determined by parameters such as autism, communication needs, social communication needs, physical, intellectual and personality differences in dynamic interaction with systemic factors such as parental achievement-supporting behaviours, availability of learning support and the capacity of the school to provide the support. The general social milieu must be one that welcomes the learner and values him/her as a full member of the school, acknowledging that the valuable contribution which he/she brings is important. A positive attitude towards inclusion is a prerequisite.

In South African schools, which have included all learners by default, because support for learners with special needs was not available to them, there is already a feeling that all learners belong to the community. To ensure, however, that all educators know how to deal with learners with Asperger Syndrome in mainstream schools, the education department will have to find ways of building capacity to offer learning support amongst staff at schools and to provide the necessary infrastructure.

Theoretically all learners could be included in mainstream classes, provided that the necessary support is available. However, the cost of providing intensive support in the form of specialist centres is too high for a country like South Africa that has not yet succeeded in supplying basic education for all its learners. This is supported by negative reports on the social integration of autistic learners into mainstream schools (Watson *et al.*, 1999; Domfors, 1998). Physical constraints and negative reports seem to mitigate against providing specialised education for learners with Asperger Syndrome. The parameters of autism, as well as intrinsic and extrinsic factors, may combine in any one of several computations resulting in a different set of educational needs. In order to meet the needs of this diversity optimally, each learner's case should be assessed in context. On the basis of this assessment, the one of the full range of placement options that matches his/her needs most closely should be chosen.

5.2.2 Indicators for successful inclusion of learners who have Asperger Syndrome in a mainstream school

5.2.2.1 *Intrinsic factors*

Learners who are verbal in their communication and interaction have an advantage in that they can access classroom teaching. They are, therefore, more suited to inclusion than learners who have no verbal communication skills. Other favourable intrinsic factors are an absence of other serious disabilities and average to high levels of intellectual functioning. The learners in this study met these criteria.

Several parameters of autism favoured an inclusive placement. These are the intensity of autism and ability to communicate verbally, the onset of the level of autism and the ability of the learner concerned to access the curriculum without major adjustments on the part of the educators. According to Watson, Gregory and Powers (1999), linguistic competence in spoken language is crucial to successful integration.

The learner's 'normal' range of intellectual functioning and the absence of other disabilities further enhance successful learning in mainstream education and correspond with findings in the literature (Kluwin and Moores 1992; Smith 1998; Watson, Gregory and Powers 1999).

In sum, the parameters of autism in the learners to be included into the mainstream, and their intellectual and linguistic competence are intrinsic factors which contribute

positively to their success in an inclusive setting. The educators concerned can be given support in the form of organisational skills and classroom management to help them cope with day to day challenges.

5.2.2.2 Extrinsic factors

Family-related factors

The parents of all the learners mentioned in this study played a vital role in their children's successful inclusion in the mainstream, some more than others. This strongly suggests the importance of actively involving parents, regardless of how humble or poorly educated they are, in decisions related to their child's education, and allowing them to share responsibility for the education of their child. The findings of this study highlight the value of making parents active members of the learning support team.

School-related factors

The school's positive attitude towards the inclusion of all learners as well as efforts to accommodate learners with a broad range of needs create a facilitating environment for inclusive education. This factor plays an important role in ensuring a positive learning experience for the learners in this study.

The school's administration and record keeping are excellent and provided this study with valuable background information about the learners and education plans previously used to accommodate learners with special needs. The support provided by the educators in the classroom is important to the learner's progress. The special support assistants are well trained and provided valuable support to the learners in this study. It is important that educators are made to feel confident of their knowledge and skills, and that they are encouraged to be independent problem-solvers in their classroom. Good practice should be affirmed and opportunities to share this with other educators should be encouraged in every school. Collegial support is a valuable yet under-utilised means of support and method of improving practice.

The in-service training at this school contributed to successful implementation of skills and strategies to ensure inclusion for all learners.

The high level of support from the specialist centre, support workers, parents and outside agencies ensured good communication between participants and successful inclusion.

The learners seem to be well integrated socially. They seem happy in the mainstream setting and at being part of lessons every day. The secure environment that the specialist centre guarantees means the learners can relax and focus on important aspects of successful learning. Supported lessons from the centre provide further coping mechanisms to help with the inclusion process.

To sum up, the school-related factors that stood out as positively enabling the learners' learning are the positive attitude of the school towards inclusive education, the willingness of educators to support the learners and to adapt to their needs, classroom support and the acceptance by, and social integration with, other learners. The overwhelming success of the inclusion of learners with Asperger Syndrome is a consequence of having a specialist centre, providing effective programmes to develop the necessary skills to cope in the mainstream education environment. The same applies to providing support to teachers, parents and all agencies involved.

The issue of support

The early intervention and intensive support provided by the specialist centre as well as the excellent benefits from training the staff and support workers enabled the learners to access the mainstream education that would otherwise not have been possible. These factors played an instrumental role in their successful learning in the mainstream secondary school.

As the learners progress into the higher phase of their learning and the adolescent stage of development, their needs are likely to change and access to ongoing support may be needed. The education department should assume a greater responsibility in ensuring that support is provided for all these learners in further educational settings.

5.3 IMPLICATIONS FOR THE PARENTS/FAMILY

From this study it is clear that continuing support from parents and family enhanced the factor of successful inclusion for each learner. Disruptions at home caused disciplinary problems with learners at school. It is important that the family of a learner with Asperger Syndrome receive the necessary support from the specialist

centre, school and educational authority to help them to give sufficient support to each learner. Since the specialist centre was opened in January 2003, numerous parents commented on the massive impact it has had on their family life and child's behaviour:

P1: "I don't know what we would have done without this centre, our whole family can feel the positive effects from its support."

P4: "Our child is calmer at home and it gives us quality family time together."

P5: "This centre is a blessing to our lives and the life of our child."

The pattern established by the centre is that parents attend regular meetings at school and have contact with the specialist teacher in the specialist centre on a day-to-day basis by using a home-schoolbook. This book is used to provide information to parents about their child's day at school and parents are expected to provide the teacher with information about the child's behaviour at home. This book is also an important link between school and home and helps the parents and teacher's to give the child the necessary support.

It is thus clear that the centre has had an impact on the family life and the personal life of the learners involved. The specialist centre will continue to support families, until the learners leave the mainstream school.

5.4 IMPLICATIONS FOR THE LOCAL EDUCATION AUTHORITY

The local education authority has developed confidence in its initial brainchild of inclusive education of learners with Asperger Syndrome. The success of the specialist centre showed that this could be a lasting establishment, continuing to meet future learners with Asperger Syndrome.

Financially the education authority has gained from establishing this specialist centre, as they no longer need to place learners in special schools at very high costs. These learners can now access the mainstream environment and this will, in the long run, save the government a lot of money.

According to the local education authority, this centre is the first of many and it is hoped that every primary and secondary school will have such a centre within ten years.

5.5 IMPLICATIONS FOR THE SUPPORT STAFF

Without the support staff a specialist centre to include learners with Asperger Syndrome would not be possible. The success of the specialist centre in this study has very much depended on the support for, and the initiative and training of, the support staff involved in the centre.

Specialist Teacher

Being the specialist teacher in the specialist centre mentioned in this study, allowed me to have first-hand experience in establishing the centre and developing strategies to include the learners with Asperger Syndrome into the mainstream secondary school. This was an exciting project and I decided to do my master's on this study after working in the centre for a couple of months. How a specialist teacher responds depends very much on the teacher's training and willingness to continue training while working in the centre. The information about autism is still developing and it is important that the educator remain informed to ensure the best possible support for these learners. The specialist teacher is also responsible for training staff, parents and professionals to help them with the inclusion process. Continuing observation as a means of assessing the learner's progress in the mainstream school is essential. What is observed needs to be shared with parents and educators during regular meetings.

The specialist teacher is the main link between parents, learners, educators and professionals, and needs to play a supportive role in linking these parties together to ensure effective inclusion for the learners involved. The specialist teacher is also the co-ordinator of the learner's individual education plan and should provide advice and support when choosing the best possible options for the learner's education.

It is thus very important that the specialist teacher should be a vigilant and well-educated member of staff to ensure that all aspects of the specialist centre functions as it was intended to.

Support Assistant

Support assistants play an important role in supporting learners in their mainstream classrooms. These assistants need to know their role and how they should function as part of the specialist centre (Chapter Two).

Once again it is essential that support assistants receive ongoing training and are well aware of their role in supporting learners with Asperger Syndrome. These assistants also need to do observations as part of their day-to-day tasks and provide the specialist teacher, parents and educators with information regarding the learner's progress in the mainstream.

The support assistant is in many ways the link between the learners and the educators. All the support assistants involved in this study provided me with important information through their day-to-day observations of the learners during lessons.

5.6 RECOMMENDATIONS

The following recommendations are made from the information gained from this study:

- Continuing in-service training should be provided for all educators on inclusive education for learners with Asperger Syndrome. This should be provided by educators, professionals and support staff who are familiar with Asperger Syndrome.
- Regular meetings should be held between all participants and continue to do so.
- Learners should receive support in accessing further education and support should be supplied in these establishments.
- A directory of available sources of support could be compiled to help educators.
- The education department's current model of funding specialist support centres should be reviewed. Funding should be linked to support and not to classification according to the learners' special needs.

5.7 THE IMPLICATIONS OF THIS STUDY FOR SOUTH AFRICA

In the final section of this study, the findings will be related to inclusive education in South Africa. According to the National Commission on Special Needs in Education and Training (NCSNET) and the National Committee on Education Support Services (NVESS) (Department of National Education (DNE), 1997; RSA Constitution, Act 108 of 1996; RSA Schools Act, Act 84 of 1996), South Africa has emerged as a country with a strong rights culture entrenched in the Constitution and a

determination to redress the inequalities of the past by devoting attention to the development of all its citizens. This is the main reason why the inclusive education system that I investigate in this study could benefit previously disadvantaged learners with Asperger Syndrome in schools in South Africa.

It is evident that the traditional service delivery model, used to address the education needs of learners with disabilities and other special educational needs, is set to change. This model was based on a medical discourse, which linked disability to impairment and intrinsic deficiencies. On this basis of this, persons with disabilities were excluded from mainstream schools and full participation in the social and economic life of the community. Learners for whom specialized education was not provided remained outside the education system altogether (e.g. learners with Asperger Syndrome). Or they were mainstreamed without the necessary learning or psychosocial support that they needed to make progress. They were often unable to keep up with their peers and became socially marginalized. They were also often denied an opportunity to be economically productive members of the community. Special education was provided in special schools, which were classified according to disability. In Naicker's (1999:14) view, this stemmed from seeing learners with disabilities as dependent, in need of help, pity and benevolence from others. The isolation of persons with disabilities in turn led to prejudice, fear and paternalistic attitudes on the part of persons without disabilities (Naicker, 1999:14)

This situation has changed under the influence of the rights discourse which has gained momentum both internationally and nationally, and emphasizes the basic human rights of all persons, including those with disabilities, to full citizenship, independence and basic education (DNE, 1998; RSA White Paper on Integrated National Disability Strategy, 1997; RSA Act 108 of 1996; United Nations Standard Rules on Equalization of Opportunity, 1994).

Policy initiatives, such as the SA Schools Act (1996) and the recommendations of the National Commission on Special Needs in Education and Training (NCSNET) and the National Committee on Education Support Services (NCESS) and the White Paper (2000), clearly support a move towards a single inclusive system of education which recognizes the right to full participation of all citizens and plans over time to include the majority of learners who experience barriers to learning in one of a range of educational settings in the general stream of education. The availability of the

necessary support to facilitate access and learning is a crucial element of an inclusive system of education (DNE, 2000; DNE, 1997; DNE, 1996).

The education of learners who have Asperger Syndrome, especially those on the higher-functioning autism scales, will inevitably be subject to the same policies. This leads to questions as to how South African learners who have Asperger Syndrome could be accommodated under the policy of inclusive education.

While it is certainly desirable for most of the learners with Asperger Syndrome to be included in mainstream education, it must be acknowledged that many learners on the lower end of the spectrum (without verbal communication) will still require a specialized educational setting. Determining whether the best interests of a particular learner would be best served by specialist education or by mainstream education can cause some problems. Another challenge is deciding which factors should be taken into account when compiling a profile that would predict the most successful placement learners with Asperger Syndrome? The answer to these questions has far-reaching implications for educational psychologist, educators, parents and others who are involved in the assessment and planning of support in a range of possible education settings. There are also the questions related to which learners are most likely to do well in supported mainstream classes, and which are not and what characteristics schools need to be able to offer appropriate support to learners.

Suitable solutions to all of the above questions could contribute to the effective implication of this inclusive system for learners with Asperger Syndrome. It remains, however an essential part of the education system to consider the possibility and to work towards inclusion for all learners with special needs, not excluding learners with Asperger Syndrome.

5.8 LIMITATIONS OF THIS STUDY

Three limitations of Interpretive Analysis discussed in Willig (2001:63-67) apply to this study. These limitations are as follows:

The limiting role of language

The participants made use of verbal language to express their experiences. Willig (2001:63) argues that language does not necessarily provide participants with the tools to capture those experiences. Having direct access to the learners, educators, parents and professionals' experiences therefore seems impossible. Willig (2001:63)

provides the insight that the language they chose to describe their experiences constructed a particular version of those experiences.

Description or explanation

The focus of this study was on the description of the learners', parents', educators' and professionals' experiences. Willig (2001:64) considers that research of this kind describes and documents experiences, but fails to explain it. For him, true understanding of experiences occurs only when one becomes aware of the conditions that gave rise to these experiences in the first place.

Generalising of findings

A third limitation of this study is the generalisability of the findings. Wood (1992:2825) contends that with most qualitative research the findings cannot be generalised to all study participants or to the study population. Therefore, the findings from this study can only be used in future research at the same school. However, the process of research might be useful in other studies.

Data analysis

Another possible limitation is the amount of data that was available to analyse. The ideal would have been to have more than one researcher, so that themes could be identified and verified by more than one individual.

In hindsight, I would have liked to hear the learners', parents', educators' and professionals' reflection on the themes and main themes. Therefore, a second level of verification seems appropriate. These reflections from the educators could provide valuable information, supplementing the study's findings.

Contextual Placement

A final limitation of this study lies in its contextual placement in Wales, which does not meet the criteria of the general South African population.

5.9 REFLECTION

South Africa is a country with a history of prejudice and separatism. The present government is committed to a rights culture and a democratic order. Transformation in several social structures is underway. The social construction of disability has been challenged and set to change. The right to participation at all levels in society is

recognised. Inclusive education as a means of facilitating participation has become policy.

After a review of the literature on the interpretive approach and a case study of a specialist centre and the experiences of the learners, parents, educators and professionals attached to the centre in the context of a mainstream secondary school in Wales, I concluded that learners with Asperger Syndrome could be successfully included in the mainstream school with the support of a specialist centre. However, certain intrinsic and extrinsic criteria will have to be met. The findings of this study suggest that intrinsic factors such as the parameters of autism, the absence of additional disabilities and 'normal' intellectual functioning were critical factors in the learner's success in the mainstream. Extrinsic factors, such as parental achievement-supporting factors, the school's positive attitude towards inclusion, classroom-based learning support, good social integration, early intervention and the support from a specialist centre were identified as critical factors in the learners' success. It is suggested that all the systems need to be included when assessing learners for placement and that evidence of the factors mentioned above could be used as part of a predictive index of indicators of successful inclusion.

Since neither autism nor education systems are homogenous or static in nature, I understand that a different set of intrinsic and extrinsic factors could yield very different needs. With this in mind, each individual learner with Asperger Syndrome should have his/her needs carefully assessed and matched to the system's ability to meet those needs and on this basis the most suitable placement out of a range of possible placements should be recommended.

In concluding this chapter and study, I reflect on a journey of coming closer to understanding the experiences that learners, parents, educators and professionals might have as they support learners with Asperger Syndrome in a mainstream secondary school. For a moment I could view inclusion from the perspective of a learner, parent, educator and professional, and not just through the eyes of a specialist teacher.

I believe that the findings of this qualitative research add credibility to the limited research on how a specialist centre can contribute to successful inclusion of learners with Asperger Syndrome into a mainstream secondary school. They also add credibility to the experiences of learners, parents, educators and professionals in

their quest to develop a supportive system for inclusion of learners with Asperger Syndrome in mainstream secondary schools.

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APPENDIX A

APPENDIX A

INTERVIEW / DISCUSSION WITH EDUCATORS (E):

1. Support in classrooms?
2. Inclusion of ASD-Pupils into lessons?
3. Social integration?
4. Attitude of peers?
5. Involvement of parents?
6. Adjustments made to teaching methods?
7. Classroom structure?
8. Difficulties / obstacles experiences?
9. In-service training?
10. Behaviour of students?
11. Progress of learners?
12. Personal experience?
13. Advice to other educators?

INTERVIEW WITH THE PARENTS (P):

1. Background information about pupils?
2. Family background
3. Behaviour and challenging situations?
4. Education up to now?
5. Inclusion in mainstream?
6. Support in education?
7. Support at home?
8. Concerns?
9. Expectations from school / education?
10. Future vision for student?

INTERVIEW WITH LEARNER (L):

1. Past experience on mainstream education (primary school)?
2. Day-to-day challenges?
3. Feelings about school?
4. Perception of Education or academic structure?
5. Feelings about support?
6. Concerns?
7. Organisational skills?
8. Peer relationships?
9. Future vision?

SUPPORT WORKERS (LSA):

1. Role in supporting pupils?
2. Methods used?
3. Information about child's history?
4. Role of teachers and LSA?
5. Ongoing support?
6. Attitude of school?
7. In-service training?
8. Experience?
9. Academic structure?
10. Adaptation skills
11. Day-to-day working

APPENDIX B

APPENDIX B

Assigned category codes, category formation and clustering of categories into patterns

Category Codes	Category Names	Clustered into pattern
C1	Additional disabilities	Child Related Factors
C2	Self esteem in the mainstream	
C3	Coping mechanisms	
C4	Academic achievements	
C5	Socialising skills (friendships)	
C6	Obsessions	
C7	Communication	
S1	Achievement in mainstream	School related Factors
S2	Physical facilities in school	
S3	School administration	
S4	Attitude of school towards Inclusion	
S5	Teachers attitudes of inclusion	
S6	Knowledge about problems	
S7	Collegial relations	
S8	Teacher personalities	
S9	Classroom Support	
S10	Curriculum	
S11	Specialist centre	
S12	Peer relationships	
S13	Induction program	
S14	Intervention programs	
F.F. 1	Achievement enhancing factors	Family Factors
F.F. 2	Socio-economic factors	
F.F. 3	Family structure	
F.F. 4	Support to pupil	
F.F. 5	Involvement with school	
F.F. 6	Problems at home	
D1	Funding	Education Department
D2	Support	
D3	Curriculum	
LS 1	External support	Support
LS 2	Consistency of support	
LS 3	Co-ordination of support	
LS 4	Classroom support (Mainstream)	
LS 5	Specialist centre support	
LS 6	Early intervention	
LS 7	Observation of support	
LS 8	Pupil reaction to support	
LS 9	Specialist support teacher	

APPENDIX C

APPENDIX C

Child Related Factors

Codes	Category Names	Yes	No	Bad	Not so Good	Average	Good	Excellent
C1	Additional disabilities	xxxx	xxxx					
C2	Self esteem in the mainstream			x	xxx		xxx	x
C3	Coping mechanisms			x		x	xxxxxx	
C4	Academic achievements			x	x	x	xxxxx	
C5	Socialising skills (friendships)				Xxxx	x	xx	x
C6	Obsessions	Xxx xxxx	x					
C7	Communication				Xxxxxx		xx	

School related Factors

Codes	Category Names	Yes	No	Bad	Not so Good	Average	Good	Excellent
S1	Achievement in mainstream				Xxxx	Xx	xx	
S2	Physical facilities in school						X	
S3	School administration						X	
S4	Attitude of school towards Inclusion						X	
S5	Teachers attitudes of inclusion						X	
S6	Knowledge about problems						X	
S7	Collegial relations						X	
S8	Teacher personalities					x		
S9	Classroom Support							x
S10	Curriculum							x
S11	Specialist centre							x
S12	Peer relationships						x	
S13	Induction program							x
S14	Intervention programs						x	

Family Factors

Codes	Category Names	Yes	No	Bad	Not so Good	Average	Good	Excellent
F.F. 1	Achievement enhancing factors					xxxxxx	xx	
F.F. 2	Socio-economic factors				xx		xxxxxx	
F.F. 3	Family structure			x	xx	xxx		xx
F.F. 4	Support to pupil			x	xx		xxx	xx
F.F. 5	Involvement with school			xx	xx		xxx	x
F.F. 6	Problems at home	xxxxxx	xx					

Education Department

Codes	Category Names	Yes	No	Bad	Not so Good	Average	Good	Excellent
D1	Funding	x					x	
D2	Support	x						x
D3	Curriculum	x					x	

Support

Codes	Category Names	Yes	No	Bad	Not so Good	Average	Good	Excellent
LS 1	External support	xxxxxx	xx					
LS 2	Consistency of support	Xxxx xxxx					Xxxx xxxx	
LS 3	Co-ordination of support	Xxxx xxxx					Xxxx xxxx	
LS 4	Classroom support (Mainstream)	Xxxx xxxx						
LS 5	Specialist centre support	Xxxx Xxxx						
LS 6	Early intervention	Xxxx Xxxx						
LS 7	Observation of support	Xxxx Xxxx						
LS 8	Pupil reaction to support						Xxxx xx	xx
LS 9	Specialist support teacher	Xxxx Xxxx						

APPENDIX D

APPENDIX D

INTERVIEW QUESTIONS FOR SCHOOL:

1. What is Asperger Syndrome?
2. How does the school feel about taking in students on the Autism spectrum?
3. What will the school do to prepare and train their staff?
4. What special arrangements will the school have to make to accommodate these students?
5. What is the school's view on inclusion?
6. What does staff know about inclusion?
7. Is there any inclusion taking place in school at present?
8. Will inclusion change the school environment?
9. What will the school do to prepare all students for an inclusive environment?
10. What financial obligation will the school have to become an inclusive school?
11. Will specialist provision in the school help students with Asperger Syndrome?
12. How will the school go about setting up a specialist provision for ASD?
13. What will be expected from a specialist teacher in charge of the ASD-Centre?
14. What support will be needed?
15. Will all children benefit from a specialist ASD-Centre in the school?
16. Who else will benefit from a specialist ASD-Centre in the school?
17. Any other view on specialist provision for ASD's in mainstream school?
18. Any advice to other mainstream secondary schools?

APPENDIX E

APPENDIX E

INTERVIEW QUESTIONS FOR LEA:

1. What is Asperger Syndrome?
2. How does the LEA feel about inclusion for students on the Autism spectrum?
3. What will the LEA do to prepare and train staff?
4. What special arrangements will schools have to make to accommodate these students?
5. Why is inclusion an important movement forward for education?
6. What is the first step the LEA needs to take to ensure this process to be a success?
7. Is there any inclusion taking place in schools at present?
8. Will inclusion change the school environment?
9. What will the LEA do to prepare all students for an inclusive environment?
10. What financial obligation will the LEA have, to include students with ASD into mainstream schools?
11. Will specialist provision in the schools help students with Asperger Syndrome?
12. How will the LEA go about setting up specialist provision for ASD?
13. What will be expected from a specialist teacher in charge of the ASD-Centre?
14. What support will be needed?
15. Will all children benefit from a specialist ASD-Centres in the schools?
16. Who else will benefit from a specialist ASD-Centres in the school?
17. Any other view on specialist provision for ASD's in mainstream schools?
18. Any advice to other mainstream secondary schools?

APPENDIX E1

APPENDIX E1

IDENTIFICATION OF THEMES DURING INTERVIEW WITH PROFESSIONALS:

Education Psychologist	Speech-therapist	School Nurse	SENCO	Physiotherapist	LEA
Look at the full picture and then decide what is best for the learner	I can only do so much, the rest of the work should happen in school and the specialist centre	These children need to feel safe in their school environment to improve their self esteem	The more teacher's know the better part they can play in self-esteem development	Some areas may be hazardous to children with Autism Spectrum Disorder's, because of poor motor co-ordination	The LEA will provide the school with a set-up fund, but the school will have to provide continuing funding for the centre
The specialist centre should provide sufficient education of coping mechanisms	The specialist centre should support the learners with the programs supplied to them.	In this case it is the parents who are causing us more problems that the student	School can be stressful for these children and therefore we need to encourage them to enjoy it, rather than push for excellent grades	The specialist centre support the children with movement lessons and motor-skills development.	The LEA will place the children in the centre every year according to specific criteria.
This is one of the functions of the specialist centre, to teach friendship skills	The school allows us to access the school for regular check-ups.	We rely on the specialist centre to provide us with information regarding the children's day-to-day health.	You, the specialist teacher, is responsible for the day-to-day administration of the centre	The LEA funds some of the projects we launch in the schools	The LEA and school work together to co-ordinate the management of the centre.
The specialist teacher needs to communicate the needs of the children to the teachers in morning meetings	The LEA funds some of the projects we launch in the schools	We are in the school every afternoon for children who need to talk about health related issues.	Each child is individual and therefore needs an individual education plan		Any additional support the school needs, the LEA will provide.
I can recommend programs, but it depends on the needs of the children and the specialist teacher will have to address these needs in combining these programs			These parents are very involved and therefore you should not have any problems when it comes to support		
You can see how parent involvement plays an important role, because you can spot the success in those learners					
In our area we have the National Autistic Society and Autism Cymru who will support the centre					

Cluster 1: Child related factors

Cluster 4: Factors related to the education department

Cluster 3: Family factors

Cluster 2: School related factors

Cluster 5: Support

APPENDIX F1

APPENDIX F1

INTERVIEW QUESTIONS FOR PARENTS:

1. How does Asperger Syndrome affect your child's education?
2. How do you feel about inclusion for students on the Autism spectrum?
3. What do you expect from the school and the staff?
4. What special arrangements do you expect the schools to make to accommodate your child?
5. Why is inclusion an important movement forward for education?
6. What do you do at home to include your child into the mainstream of life?
7. Is inclusion taking place in your child's school at present?
8. Do you receive any support from the LEA or other agencies at present?
9. Will you expect all students to understand inclusion and ASD?
10. What financial support will you expect the LEA to give, to include your child into the mainstream school?
11. Will specialist provision in the school help your child?
12. What will you expect from specialist provision?
13. What do you expect from a specialist teacher in charge of the ASD-Centre?
14. What support do you think your child will need?
15. Will all children benefit from a specialist ASD-Centres in the schools?
16. Who else do you think will benefit from a specialist ASD-Centre in the school?
17. Any other view on specialist provision for ASD's in mainstream schools?
18. Any advice to other parents with ASD children?

APPENDIX F2

APPENDIX F2

INTERVIEW QUESTIONS FOR PARENTS:

1. How does Asperger Syndrome affect your family?
2. When was your child diagnosed?
3. Does your child know that he has Asperger Syndrome?
4. Does your child understand what Asperger Syndrome is?
5. Does your child have any friendships?
6. Describe your family composition?
7. Have you ever had any support from Social Services?
8. Do you receive any financial support from the government?
9. Does your child show any extreme behaviour problems not associated with ASD?
10. Do you receive any support from other family members / friends / carers?
11. How do you deal with extreme behaviour problems?
12. Have you had any training in Asperger Syndrome / dealing with behaviour problems?
13. Do you take your child on regular holidays?
14. Do your child have normal eating and sleeping patterns?
15. Is your child with Asperger Syndrome affecting the rest of your family (describe)?
16. What do you expect the education authority to do for you and your family?
17. What is your future vision for your child?
18. What are your concerns regarding your child?
19. Do you support inclusion?
20. Any other information about your child!

APPENDIX F3

APPENDIX F3

IDENTIFICATION OF THEMES DURING INTERVIEW WITH PARENTS:

PARENT 1	PARENT 2	PARENT 3	PARENT 4	PARENT 5	PARENT 6
This centre is the reason my son has been achieving in the mainstream	The specialist centre is a support that we would not be able to do without. Our son has never been this positive about school.	We did not have such a centre in his previous secondary school, he did not have the opportunity to develop as he did in this school	Support is very important, without it (C4) would have been in a special school	Our son makes more eye-contact and communicates with his peers, something he did not do before he went into the centre	We can support him, because we are part of his education plan
I don't know if he will be able to cope with the demands of communication and language in the mainstream	It is reassuring that teachers know what Autism Spectrum Disorder is and how to deal with it in the mainstream education	It is a pleasure to interact with our son, because he uses the social communication skills learnt in the centre	The LEA is to thank for all the funding they provided to establish and manage this centre	My child has been struggling with friendships and socialising all his life, we would like to see him developing friendships	Our son has been bullied all through his school life.
As parents we feel very involved	I don't know what we would have done if we did not have this school and the support we are getting from the LEA	The LEA has done a great job in opening a centre for children with Autism.	Why else would we want (C4) to go to mainstream education, of course he needs good grades	We were part of his education plan from the beginninghas a very low self image and it is affecting his self-esteem
My son will not be able to function as he does, without support in his lessons	Our son is happy in school now and enjoy doing the work that is sent home from time to time. I could not imagine him going to any other school.needs to develop his self-esteem and confidence...	I don't know what we would have done if we did not have this school and the support we are getting from the LEA	The LEA has never been so good as they are now. For the first time they know what we need and is providing us with the necessary funding.	I'm pleased to say that this school has made a tremendous effort to include our son into the mainstream school, a large amount of money has been spent in making this possible
It is important for (C1) to have a job when he leaves school	We've had some hard times with the LEA and is very thankful that they have finally started doing something about inclusion for our children.	My child will need good grades to enter a college or university	Our son enjoys going to school and is very positive about his future.	The school is more aware of our son's needs and is providing him with the quality of education he should get.	The support we have been getting from the centre is invaluable.
I expect the specialist centre to provide sufficient support for my son in the mainstream	The support assistants are doing a great job in supporting these learners in the school.				Our son enjoys working with his support assistant.

APPENDIX G

APPENDIX G

INTERVIEW QUESTIONS FOR EDUCATORS

1. What do you know about Asperger Syndrome / Autism spectrum disorders?
2. How do you feel about inclusion for students on the Autism spectrum?
3. What do you think the school will expect from educators teaching students on the Autism spectrum?
4. What special arrangements do you the schools will need to make to accommodate these children?
5. Why is inclusion an important movement forward for education?
6. What can you as teacher do to support the development of social skills, communication skills and friendship skills in the mainstream school?
7. Is inclusion taking place in the school your teaching at present?
8. What will you expect the LEA to do to help you with this inclusion process?
9. How will you help other student understand inclusion and Autism spectrum disorders?
10. What financial support will you expect the LEA to give, to include theses students into the mainstream school?
11. Will specialist provision in the school help these students?
12. What will you expect from specialist provision?
13. What do you expect from a specialist teacher in charge of the ASD-Centre?
14. What support do you think you will need when having these children in your class?
15. Will all children benefit from a specialist ASD-Centre in the school?
16. Who else do you think will benefit form a specialist ASD-Centre in the school?
17. How will inclusion affect the curriculum?
18. Any other views on specialist provision for ASD's in mainstream schools?
19. Will you expect parents to provide you with information regarding the students you teach?
20. Any advice to other teachers?

APPENDIX G1

APPENDIX G1

IDENTIFICATION OF THEMES DURING INTERVIEW WITH EDUCATORS:

EDUCATOR 1	EDUCATOR 2	EDUCATOR 3
I think these learners will need more support than 'normal' learners, because they might have a low self-esteem and will need someone to 'boost' them a bit	I won't mind teaching these learners, but I'll need training to help me in this process	I would like to see these learners achieve in some way or another in school, it will depend on me as educator to help them achieve academically
I did not know much about Asperger Syndrome before the specialist centre was opened at our school.	As a senior staff member I feel it is always useful to learn new skills and to make changes to an old regime.	I think as educators we will have to look at the way we talk and ensure that all learners understand what we want to say in lessons
I would imagine these learners needing some sort of 'coping mechanism', and us as teachers needing to help them use these mechanisms to help them cope in mainstream education	Obsessions can sometimes be good and should be used to the learner's advantage	The specialist centres is invaluable. I don't know what our school would have been like without the support it gives to the learners and teachers
As an educator I suppose I will have to make some adaptations to accommodate these learners. It will be challenging though!	I've heard about Autism before, but Asperger Syndrome, never!	I've read some books about Autism Spectrum Disorders, but I have never taught children with the disorder until I started teaching at our school.
If forming friendships is a problem, then I feel educators will be expected to step in and give guidance in the necessary skills	Inclusion is a concept not all educators understand, especially older educators like myself. I sometimes feel the need for further training in this field	In our school the learners with Autism Spectrum Disorders access 'safe haven' rooms, where they can retreat to when they feel stressed or anxious
Adapting a curriculum is already part of education and inclusion of learners, I can not see it being any different for children with Autism Spectrum Disorders	I think the school and LEA can do more to educate and train us teachers	We receive quite a lot of documents related to these learners, most of which are passed on to the specialist centre or SENCO
The specialist centre provides an awful lot of support, but I still feel the need to communicate with my colleagues about my teaching and inclusion of these learners	I found it very hard to cope with extra support in the beginning, but do not know what I'll do without it now	I need to know the learner's needs to be able to provide an adaptable curriculum. Contact with the specialist centre has helped considerably
I am not aware of any support in our area, but would like to find out	I never thought I will be teaching these skills, but I can now see that there is a desperate need for me to do so	Contact with the specialist centre has helped considerably
I need the parents to help me understand the child's needs. I expect parents to be involved and to support academic work	Educators fulfil a supportive role, especially in the town where we live	I use intervention programs as part of my teaching with all learners, I might have to adapt some of it, but I am sure it will not be any major changes
The LEA provides support to the school, but I'm sure they have structures that support teachers, parents and learners	I believe consistency is the key to effective support	All files are freely available for teachers and this provides valuable information to us
I find it hard to co-ordinate LSA's, but I know it is important that I do this to ensure that all learners receive adequate support	I find the specialist centre very helpful and it has given me some valuable advice	I'm sure there is funding available, I am just not aware how to access it. It will be very helpful to provide adequate resources to these learners
	I find the specialist centre very helpful and it has given me some valuable advice	As a teacher I am expected to observe learners and the support given to them

Cluster 1: Child related factors

Cluster 4: Factors related to the education department

Cluster 3: Family factors

Cluster 2: School related factors

Cluster 5: Support

APPENDIX H

APPENDIX H

IDENTIFICATION OF THEMES DURING INTERVIEW WITH LEARNERS:

LEARNER 1	LEARNER 2	LEARNER 3	LEARNER 4	LEARNER 5	LEARNER 6
I have one good friend, but I won't mind having more	I do not enjoy Physical Education and prefer lessons in the specialist centre to going to Physical Education	School is more pleasant since the centre was opened	I don't enjoy parties, and won't go to any	I know what I have, but I can not explain it to anyone	I enjoy this school much more and feel I am seen as an individual and not as a problem anymore
My mother fills in my homeschool book every day	I have one brother and one sister, but I rather play with my brother	I don't think my friends will understand	I find it hard to understand my friends, and sometimes I'm not sure if they really are my friends	My friends might treat me differently	My parents like this school more and say I am in good hands.
I have as support assistant in all my lessons	I have heard that I have Autism Spectrum Disorder, but I do not know how to put it in words	I find it hard to keep-up in lessons	I need my support to help me cope with the workload	I want to be in top sets, and therefore I have to work hard	I don't always understand why people laugh at me, I guess I have as good sense of humour
I want good grades, because I want a good job	When I leave school I want to work in a games shop. I would like to play games all day,	I have made some great friends since I've been taught how to.	My parents visits the school at least twice every term	I find music very stressful and am glad to complete work in the specialist centre	In my previous school nobody liked me and I was bullied.
My life changed when the centre was opened in our school	I do not enjoy school so much, but since the centre opened it is easier.	I don't need support in all my lessons, I have taught myself how to keep up.	I need my support in maths, because the work is very stressful	I don't need support in all my lessons and will go to the centre if I have a hard time.	I need support and enjoy working with my support assistants.
My specialist interest is Dinosaurs. I can talk about Dinosaurs all day. It sometimes irritate my friends and family if I talk about it too much.	Teachers are much better since the centre opened. My Maths teacher does not shout at me anymore when I don't understand the work.	I don't like it if my mother comes to school. It is very embarrassing to me.	I need the centre to help me cope in the mainstream school	My parents visit the school often to make sure I'm coping better than in the primary school.	I like the support centre and enjoy the lessons we have in there. I also like doing my homework at school.

Cluster 1: Child related factors

Cluster 4: Factors related to the education department

Cluster 3: Family factors

Cluster 2: School related factors

Cluster 5: Support

APPENDIX I

APPENDIX I

OBSERVATION DOCUMENT

THIS FORM IS ONLY USED BY THE SPECIALIST TEACHER

LEARNER: DATE:

LESSON: SUPPORT:

Learner participation in lesson	
Learner reaction to support	
Effectiveness of support in this lesson	
Teacher's approach toward the learner	
Teacher's adaptation of lesson for learner	
Form of instructions given in lesson (visual, verbal)	
Work covered in lesson	
Other learner's approach to learner	
Position of other learners in classroom	
Physical facilities in the classroom	
Position of learner in classroom	
Position of support assistant	

Learner's working style	
Learner's interaction with other learners	
Communication in lesson	
OTHER OBSERVATIONS	

Recommendations

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Specialist Teacher

SENCO

ADDENDUM J

ADDENDUM J

DAILY REPORT

USED BY SUPPORT ASSISTANTS

LEARNER: DATE:

LESSON	CLASSWORK	BEHAVIOUR
1		
2		
BREAK		
3		
4		
LUNCH		
5		
6		