

PAPA

A Study to Evaluate the TEACCH Project

(Treatment and Education of Autistic and related Communication handicapped CHildren)
in the South Eastern Education and Library Board Area of Northern Ireland

1995-96

Professor David Sines
University of Ulster



Commissioned and Sponsored by the Department of Health and Social Services (Northern Ireland), the Eastern Health and Social Services Board, the South Eastern Education and Library Board and the Lisburn Health and Social Services Trust

TEAM MEMBERS

THE RESEARCH TEAM

Professor David Sines - University of Ulster
Mr Kenneth Moore - Research Officer

RESEARCH ASSISTANTS

Ms Jennifer Creegan
Ms Christine Lavery

THE TEACCH PROJECT TEAM

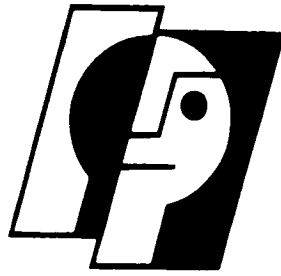
Mrs Arlene Cassidy (P.A.P.A) - TEACCH Project Co-ordinator
Mrs Heather Crawford - Speech and Language Therapy Manager
- Down and Lisburn Health and Social Services Trust
Mrs Kate Doherty - Support Teacher for Pervasive Developmental Disorders, South
Eastern Education and Library Board
Mr Alex Frabboni - Senior Day Care Worker - Down and Lisburn Health and Social
Services Trust
Miss Paula Jordan - Special Needs Teacher, (Seconded to Project) South Education and
Library Board
Mrs Eileen Sherrard - Consultant Clinical Psychologist, Head of Psychology Services -
Down and Lisburn Health and Social Services Trust

MEMBERS OF THE PROJECT STEERING GROUP

Mrs Liz Aiken (P.A.P.A)
Mrs Arlene Cassidy (P.A.P.A)
Mr Miceal Crilly (Down and Lisburn Health and Social Services Trust)
Ms Maureen Dodd (E.H.S.S.B.)
Mr Sidney Irvine (South Eastern Education and Library Board)
Mrs Iris McBride (South Eastern Education and Library Board)
Mr John McConnell (P.A.P.A)
Professor David Sines (University of Ulster)
Mr Stanton Sloan (South Eastern Education and Library Board)
Mr Boyd Turner (DHSS)

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P.A.P.A

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University of Ulster

Parents and Professionals
AUTISM &
Northern Ireland

EXECUTIVE SUMMARY

Commissioned and Sponsored by the Department of Health and Social Services (Northern Ireland),
the Eastern Health and Social Services Board, the South Eastern Education and Library Board and the
Lisburn Health and Social Services Trust

EXECUTIVE SUMMARY

AIM and OBJECTIVES

The TEACCH (Treatment and Education of Autistic and related Communication handicapped CHildren) project was sponsored by the Department of Health and Social Services (Northern Ireland), the Eastern Health and Social Services Board, the South Eastern Education and Library Board and the Down and Lisburn Health and Social Services Trust. The purpose of the Evaluation Study was to evaluate the effectiveness of the TEACCH approach for participating people with Autism.

The key aims of the evaluation were:-

- 1- To identify the human and practical resources required to facilitate the extension of TEACCH into the home in order to empower parents to teach and manage their own children effectively.
- 2- To consider the impact that TEACCH might have with the adult population with the aim of reducing institutionalisation and promoting positive health and social gain (thus demonstrating 'value for money').
- 3- To identify the training, support and monitoring requirements required to maximise the effectiveness of TEACCH throughout Northern Ireland.
- 4- To make recommendations regarding the establishment of an active and cost-effective collaborative network of TEACCH therapists in Northern Ireland.
- 5- To provide objective data to inform the desirability and enactment of a TEACCH strategy in each Education and Library Board and Health and Social Services Board in the Province.
- 6- To provide data to assess the extent to which TEACCH enhances the quality of life for persons with Autism and their families.
- 7- To make recommendations to enhance the quality and effectiveness of TEACCH in Northern Ireland.

STUDY DESIGN

The study was designed in five related stages:

STAGE ONE

This stage of the study involved the collection of informal data relating to the impact that TEACCH has had on all children, families and teachers since its inception in the STUDY area. Data was collected from a variety of sources and involved the collection of information from families, carers and professionals who were involved in the use of TEACCH since January 1991 (for example evaluation reports of workshops; letters from parents, professionals and managers and other related evidence - e.g. anecdotal comments).

STAGE TWO

The second stage involved the collection of data from all parents/carers, professionals and project staff (associated with the nineteen children selected for involvement in the project) in respect of their evaluation of the effectiveness of TEACCH following the administration of a postal questionnaire (and personal interview for parents). A 100% response rate was achieved from the nineteen parents. Of the 53 professional support staff identified as working with the 19 children and seven adults included in the central study, 28 returned questionnaires thus resulting in a 53% response rate. Of the 17 people identified as directly involved in the administration of TEACCH methods 11 replied providing a response rate of 65%.

STAGE THREE

This stage of the evaluation involved the rating of two TEACCH structured classrooms in the South Eastern Education and Library Board project area against the Division TEACCH classroom checklist. The checklist was administered on a self-report basis by class teachers and was validated by a member of the research team as part of an 'on-site' visit.

STAGE FOUR

The fourth stage of the evaluation involved a convenience sample of 19 pupils across the four local SLD schools in the South Eastern Education and Library Board area and one additional child from another Education and Library Board area (included as a 'control pupil'). Pupils were selected by the TEACCH Team against the following criteria:

- * All subjects were rated as having a diagnosis of Autism using the C.A.R.S. assessment scale;
- * All subjects were in receipt of TEACCH (supported by a member of the Project Team) preceded by the completion of a baseline PEP/AAPEP;
- * Parental/Carer consent had been provided.

A total of nineteen pupils (plus one control pupil) in four schools were identified for inclusion in the study. In addition seven adults were included as a separate cohort group.

A comparison was made between each subject's baseline and post-baseline PEP/AAPEP (with a minimal interval of one year between the two) and class notes and records were also examined. Where available, psychometric test results were also compared. Evidence was collected from student files in respect of primary and secondary diagnoses, the severity of Autism and significant medical, educational and psychological factors. Case files were compiled on each subject by the Project Team.

STAGE FIVE - THE ADULT STUDY

The adult sample was selected following consultation with the local Day Service and the responsible Consultant Clinical Psychologist. A total of six subjects were diagnosed as having Autism and the seventh had a non-specific communication related disability. All seven were in receipt of TEACCH which had been introduced at the Day Service in 1993. Both baseline and post-baseline AAPEP assessments were provided for comparison. Comprehensive files for each student were also analysed. Evidence was collected from student files in respect of primary and secondary diagnoses, the severity of Autism and significant medical, educational and psychological factors. All parents associated with the seven subjects were interviewed and data was presented from professional support staff (following completion of postal questionnaires).

The main findings are summarised and presented in relation to key emergent issues

1. Information

- * Less than half of all respondents reported that parents and carers knew who to contact in order to access TEACCH.
- * Fifty five per cent of all parents considered the effectiveness of the availability and distribution of information about TEACCH to have been at least 'effective' compared to 68% of professionals and all of the project staff.
- * Sixty five per cent of parents stated that their sons/daughters were effectively prepared for the implementation of TEACCH.

and eligibility may vary across the Province and will be a key determinant of the extent to which TEACCH services are accessed.

- * The results suggest that further attention should therefore be given to developing an effective information/implementation strategy for parents/carers and support staff.

2. Sensitivity to the needs of carers

- * Results obtained from the parent studies suggest that the majority of respondents regard TEACCH to have been an effective method for improving the quality of life for their sons/daughters. However, some parents were apprehensive about its application at home due to the time that is required to ensure its successful implementation.
- * Three quarters of all parents stated that they were satisfied with the quality of home liaison provided by members of the TEACCH team; 40% requested that the service should be extended to provide more continuity and practical advice in respect of programme design and implementation.
- * The development of a 'tri-partite' arrangement between TEACCH personnel, parents and professionals is considered to be a cost-effective method of programme delivery.
- * Parents reported a demand for more evening and week-end visits from TEACCH and professional staff to assist them in maintaining the programme. The need for practical advice on how to structure programmes and to accommodate the rigorous demands that the method places on family life were also reported.
- * All but one of the parents reported, that given additional preparation and home based support, TEACCH could have potential for implementation in the home setting.
- * Sixty per cent of all parents stated that further investment should be made to ensure that all professionals (including G.P.s, nursery staff and respite/residential care providers) are 'trained' in respect of TEACCH principles to enhance effective co-ordination of their son/daughter's care plan.
- * The importance of implementing TEACCH at the earliest stage of life was emphasised.

3. Demand for TEACCH

- * Positive responses relating to the desirability and demand for TEACCH were provided by all respondent groups.
- * Respondents recommended that TEACCH be extended to all respite, residential and day care services.
- * The study has illustrated the need for the TEACCH service to be expanded to meet the needs of the majority of people with Autism, at school, work and home.
- * The extent to which present levels of service coverage meet the actual (or more universal needs) of people with Autism and their families is as yet unquantified.

4. Measuring the effectiveness of TEACCH

- * The majority of respondents rated their overall perceptions of the effectiveness of TEACCH as being at least 'effective'.
- * Over 86% of all respondents regarded TEACCH to have been at least 'effective' in assisting subjects to improve their range of self-help skills, 73% expressed an opinion in respect of positive effect on social skill development whilst 79% of all respondents reported a reduction in inappropriate and obsessional behaviour.
- * Sixty per cent of all respondents noted an improvement in mobility/gross motor skills and 82% reported gains in fine motor skill development. In the areas of communication and concentration results suggest that over 90% of subjects report positive outcomes for clients.
- * Eighty per cent of all respondents reported that TEACCH had made a difference to the subjects' level of independence and in assisting them to maintain existing levels of skills and to develop new ones.

- * 90% of all respondents considered that TEACCH had enhanced the quality of life for subjects.
- * The results relating to behavioural change demonstrate a significant reduction in both moderate and severe behaviours and the related emergence of substitute appropriate behaviours for the children and adult samples.
- * The study confirmed that there is advantage in ensuring that all TEACCH learning environments are appropriately structured in accordance with the actual assessed needs of clients in order to maximise educational and developmental gain.
- * Barriers to effectiveness related to inadequate staffing levels and the time required for its implementation.

5. The effectiveness of the TEACCH consultancy service and training activities

- * A total of 402 persons participated in TEACCH workshops. Analysis of formal evaluation reports confirms that participants rated the workshops as being 'very effective'.
- * In addition all respondents included in the children and adult studies (including parents, and professionals), reported that they had received support from members of the TEACCH project team. Eighty per cent of all respondents reported that this had been effective in assisting them to understand (and in some cases) to implement TEACCH.
- * There is a reported need for further expansion of this component of the team's work.

6. Financial Considerations

- * The present study has demonstrated that clients significantly benefit from TEACCH in a number of ways. In the first place there is a reported increase in the number of social and self-help skills that have been acquired by the twenty seven subjects included in the study. A significant reduction in the number of inappropriate behaviours has also been reported.
- * Initial findings suggest that TEACCH had contributed to the maintenance of persons with 'challenging behaviour' in the community (and therefore avoiding long-term hospitalisation). This may be regarded as an indicator of cost-effectiveness.

Recommendations

The study makes 15 recommendations highlighting the need:

- * for further investment in the provision of TEACCH to people and their families with Autism in Northern Ireland.
- * to address current gaps in service provision, particularly for additional home based liaison, additional education and training, more effective information and dissemination services and equality in the distribution of TEACCH throughout the country for both children and adults.
- * to organise the provision of local TEACCH within local mainstream domiciliary, educational and health and social care service facilities, supported by appropriately trained TEACCH co-ordinators.

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OPERATIONAL DEFINITIONS

AUTISM

'Autism is a disability that disrupts the development of social and communication skills, isolating the child or adult from the world as we perceive it. It is believed to be caused by brain dysfunction, it affects children from birth or infancy. The condition varies in severity but impairs the natural instinct to relate to fellow human beings'.

(From:- The National Autistic Society - 1994).

TEACCH

'TEACCH is a treatment and education focused approach which aims to prepare Autistic people to live or work more effectively at home, at school and in the community. It aims to reduce the need for institutionalisation by helping Autistic people and their families to live together more effectively by reducing or removing Autistic behaviour. It focuses on improving the client's skills for living and on the need to structure the environment to accommodate the specific clients deficits'.

(From:- Division TEACCH - North Carolina, USA - 1992)

SLD SCHOOL

'A school for pupils whose learning difficulties are deemed to by the Board to be severe and complex. Approximately 2-3 pupils for 1,000 would be deemed to have difficulties of this nature.'

(From:- The South Eastern Education and Library Board).

ADULT DAY CARE SERVICE

A service provided to educate and train people with learning disabilities aged over the age of nineteen. Such people do not normally have the skills to maintain paid employment. The aim of the service is to assist individuals to attain their maximum potential. Such services are usually provided within the context of a structured day centre.

CHAPTER 1

Introduction and Background to the Study

i Introduction

The TEACCH (Treatment and Education of Autistic and related Communication handicapped CHildren) project was sponsored by the Department of Health and Social Services (Northern Ireland), the Eastern Health and Social Services Board, the South Eastern Education and Library Board and the Down and Lisburn Health and Social Services Trust. The purpose of the Evaluation Study was to evaluate the effectiveness of the TEACCH approach for participating people with Autism.

ii The origins of TEACCH and its evaluation

The TEACCH programme commenced at the University of North Carolina at Chapel Hill in the USA in 1972 and provides a comprehensive programme of support for people with Autism and related disorders. Division TEACCH is responsible for planning, delivering, and assuring quality services to over 6,000 persons with Autism and related disorders in North Carolina and delivers its service through six regional centres geographically distributed throughout the State. It relies on effective collaboration with state agencies impacting on people with developmental disabilities (for example health and education). Its overall aim is to provide lifelong support for people with Autism and their families. Since its inception the TEACCH programme has received international recognition as an effective model of intervention for people with Autism.

TEACCH provides a wide range of services to a broad spectrum of people with Autism of all ages. In the North Carolina TEACCH Annual Report (1991-1992) the main features of the TEACCH Programme are described as the provision of:-

- * regional clinical and diagnostic evaluations;
- * social skills training;
- * home based intervention services;
- * support and consultation to classrooms and residential services;
- * behaviour management procedures and home based intervention services;
- * pre-school demonstration classrooms;
- * adolescent and adult support services;
- * supported employment services;
- * teaching, professional training and consultation services;
- * research and dissemination of the work of Division TEACCH.

TEACCH is essentially a structured method of education and management that relies upon systematic routines provided by trained teachers/professional staff and parents/carers who act as co-therapists thus emphasising the importance of the transfer of learning between the formal learning environment and the home setting. Ideally TEACCH should only be implemented by persons who have been appropriately trained. Schopler and Mesibov (in an unpublished International Conference paper - 1979) describe the purpose of the programme as:-

- 1- to avoid unnecessary institutionalisation of children (and presumably adults),
- 2- to facilitate and improve adaptation for child and family,
- 3- to provide individualised special education for each child,
- 4- to reduce the stresses of a handicapped child on the family.

The programme is delivered in partnership between state agencies and the University of North Carolina and has been subjected to systematic evaluation and research (Schopler and Reichler, 1971; Marcus et al, 1978; Schopler and Reichler, 1979; Reichler, DeVellis & Dally, 1980; Short, 1984; Mesibov, Troxler & Boswell, 1988; Mesibov, Schopler & Caison, 1989 etc.). One specific result emanating from these studies suggests that only 8% of TEACCH clients over the age of 18 years require placement in institutional care (this statistic refers to people with the most severe degrees of Autism but not necessarily to those with severe learning disabilities). Studies conducted in the USA and in Great Britain report that between 39% and 74% of people with Autism are institutionalised by the age of 18. The international average is 46% (Rutter, 1967; Wing et al 1979; Schopler et al, 1979; Schopler et al, 1982).

Despite the many studies that have been published on the effectiveness of TEACCH Schopler, Mesibov and Baker (1982) report:

'The development of convincing evidence for treatment effectiveness with psychiatric and behavioural disorders is not a simple research task. Complex factors are involved with changes in symptoms and problem behaviours. Influences outside the specific treatment modality also affect every outcome. Control groups are not always available Not only is the specific treatment difficult to measure, the question of outcome is further complicated over time in the distinction between short and long term effects. The financial cost of outcome research is another factor....However, the need of parents and professionals to identify the most effective treatment procedures for similar children maintains the pressure on all of us to know or find empirical bases for evaluating treatment' (p.262).

Since the TEACCH programme includes complex components, several lines of evaluation data must be compiled and applied to any research study. These include the use of informal evidence, objective measurement of outcomes in:-

- * social
- * cognitive
- * behavioural
- * self-help skill domains
- * parental/professional perceptions of treatment outcome effectiveness
- * changes in parent/staff skills.

These parameters have therefore been adopted as the basis for conducting the present research study in Northern Ireland.

iii TEACCH in Northern Ireland.

The main focus of education and treatment for people with Autism has been concentrated within educational systems for people with severe learning disabilities in the Province which have been supplemented by the provision of adult based services provided by health agencies (and their associated mental handicap - Learning Disability - personnel).

For children and adolescents provision has focused on the SLD school and has been the domain of teachers supported by health care professionals such as clinical psychologists, speech and language therapists, consultant psychiatrists and community mental handicap nurses. The Province has witnessed the implementation of a range of ad hoc experimental approaches to meeting the needs of people with Autism over the years (such as play therapy, operant conditioning, perceptual training, dietary supplementation, motor training etc.).

However, expertise in Autism had developed amongst a number of clinicians from a variety of professional backgrounds in Northern Ireland. The charity Parents and Professionals and Autism (P.A.P.A.) was formed in 1989, and began to raise awareness of Autism throughout the Province.

In 1990, a teacher and a clinical psychologist, who were members of the P.A.P.A. Executive Committee, attended the first three day TEACCH seminar to be held in the UK at Kettering - They were funded by the South Eastern Education and Library Board and Eastern Health and Social Services Board. As a result of this training TEACCH was introduced into their areas of work. In particular, the methods were implemented systematically in one school for children with severe learning disabilities (SLD) in the South Eastern Education and Library Board (S.E.E.L.B) area. By 1991 P.A.P.A. and the local Education and Library Board had funded two staff to attend a five day TEACCH workshop in England (the Down and Lisburn Health and Social Services Trust also subsequently sponsored two professional staff to attend both training events). In 1992 all four SLD schools in the S.E.E.L.B. area were using TEACCH and in two of these schools TEACCH classrooms were established for children who required the maximum level of structure in their educational environment. In the same year a major four day TEACCH seminar was organised jointly by P.A.P.A. and BARNARDO'S (and was supported by Down & Lisburn Trust and the Department of Health & Social Services). Commitment for TEACCH was further demonstrated from the Department of Education for Northern Ireland by its sponsorship of a five day regional workshop in 1993 for teachers from SLD schools throughout the Province. This was organised by the Regional Training Unit and led by Professor Gary Mesibov, Director of Division TEACCH in North Carolina. As a result, a local network of expertise and knowledge was established in the Province within the educational system and beyond'.

iii. The TEACCH Project

PAPA submitted a successful bid for funding for the introduction of a 'TEACCH Project' to the DHSS in 1993 and project status was awarded to TEACCH in the South Eastern Education and Library Board area in the same year. The aims of the Project were to further establish TEACCH as a credible and effective method of responding to the needs of people with Autism and their families and to facilitate an inter professional and co-ordinated team approach to the delivery of the TEACCH method (TEACCH Project operational policy, 1994).

Some members of the Project Team from Northern Ireland visited North Carolina in February 1994 with the aim of comparing and contrasting methods of implementation of TEACCH between the two countries.

The TEACCH project team included:-

- * 2 Specialist Teachers
- * 0.2 Consultant Clinical Psychologist
- * 0.5 Specialist Speech and Language Therapist
- * 0.3 Senior Day Care Officer

The objectives of the TEACCH Project have been stated as the provision of:

- * assessment of developmental delay and severity of Autism
- * individualised educational programmes to project clients at four selected schools and one adult day service.
- * support and advice to teachers and other professionals working with people with Autism

- * advice on behaviour management at school/work and at home.
- * examples of educational materials/tasks and schedules.
- * monitoring of subject progress.
- * education and training in the form of parent and professional workshops.
- * home consultation (and consultation with other agencies).
- * the facilitation and consolidation of an inter-professional team ethos to maximise the effectiveness of TEACCH methods.
- * data to inform systematic monitoring, review and evaluation of the effectiveness of the TEACCH method.

The Project Team have adopted a multi-disciplinary approach to the delivery of TEACCH, focusing primary attention on the needs of children and adults (and their families/carers) rather than on the needs of various support staff, professionals and agencies. All project members were originally designated as psycho-educational therapists but in reality have worked as an inter-professional team. However, irrespective of their professional background they have provided a general TEACCH service to clients and their families/carers. All project staff have been trained in the use of TEACCH methods and are experienced in the application of a broad range of interventions including behaviour management, language and social development, behavioural management, special education and family interaction/intervention. The services provided by the Project Team included the facilitation of diagnosis and assessment, the support of staff using TEACCH, the provision of workshops for parents and professionals and the implementation of a home based support service (in order to facilitate parents and carers to work as co-therapists). Home teaching and behavioural management programmes were envisaged as being an integral component of the Team's work.

The aims of the project were described as the avoidance of unnecessary institutionalisation of autistic people through adaptation in respect of three main areas of their daily lives - at home, at school/work and in the community. A Project team base was identified in a SLD school in Downpatrick. The Team reported through a named Co-ordinator to a Project Steering Group. A total of nineteen children were identified for inclusion in the Project (attending four different SLD schools in the South Eastern Education and Library Board Area). Although members of the Project staff work with pre-school age children, children in mainstream schools (without learning disabilities), and with children with mild learning disabilities, the Steering Group agreed that these children would be excluded from the present study.

TEACCH was further extended to include an adult sample in 1994 and as such seven adult students attending a local Day Service in Downpatrick were selected for inclusion in the evaluation study as a separate cohort group.

In accordance with the North Carolina experience it was agreed that the Project should be systematically evaluated (one of the key principles of TEACCH is that evaluation and treatment should be regarded as inseparable).

The present study aims to meet this requirement and to assist PAPA in meeting the accountability clause included in the DHSS contract for sponsorship of the TEACCH project. The key aims of the evaluation have been reported by members of the Project Steering group as being:-

- 1- To identify the human and practical resources required to facilitate the extension of TEACCH into the home in order to empower parents to teach and manage their own children effectively.

of reducing institutionalisation and promoting positive health and social gain (thus demonstrating 'value for money').

- 3- To identify the training, support and monitoring requirements required to maximise the effectiveness of TEACCH throughout Northern Ireland.
- 4- To make recommendations regarding the establishment of an active and cost-effective collaborative network of TEACCH therapists in Northern Ireland.
- 5- To provide objective data to inform the desirability and enactment of a TEACCH strategy in each Education and Library Board and Health and Social Service Board in the Province.
- 6- To provide data to assess the extent to which TEACCH enhances the quality of life for persons with Autism and their families.
- 7- To make recommendations to enhance the quality and effectiveness of TEACCH.

CHAPTER 2

METHODS

Introduction

The study was planned in accordance with the outcome measures recommended by Division TEACCH in North Carolina. The research team was facilitated in its work by meeting with Professor Gary Mesibov from the University of North Carolina and is indebted to him for his ongoing advice and consultancy throughout the life of the project.

The following sources of evidence were used for the present study:

1- Informal Evidence

The first four years of 'TEACCH' in Northern Ireland have provided convincing, indirect evidence of its benefit to both children, adults and their families/carers. This has been validated by numerous letters and evaluation reports provided by over 200 parents, carers, teachers and professionals who have attended TEACCH workshops in Northern Ireland facilitated by the TEACCH Team. The Project Team have collected an impressive portfolio of evidence to support their self-assessment of the effectiveness of their work and this will be referred to later in the study. Classroom records and teaching notes were also analysed.

2- Objective Programme Evaluation Measurement

The time scale and financial resources allocated for the present study (eighteen months) did not permit the implementation of longitudinal assessment of health and social gain for the children and adults involved in the Project. Consequently the evaluation has relied upon the following outcome measurements:-

1- data provided by parents, project staff and professionals in respect of their perceptions of the effectiveness of TEACCH (provided by personal parental interview and questionnaire analysis - copies of the questionnaires used for parents, professionals and project staff are provided at Appendix 1).

2- independent rating of structured classroom provision against prescribed criteria (the rating scale is provided at Appendix 2).²

3- comparison of baseline and post-baseline measurement of pupil/student psycho-educational gain following implementation of TEACCH methods (the measurement tool used for this purpose is the Psychoeducational Profile [PEP or AAPEP]³. The severity of Autism experienced by all children included in the study was assessed using The Childhood Autism Rating Scale (Tested for validity by Garfin et al in 1989).

Division TEACCH (Schopler et al, 1982) recommend that a series of outcome measures should be combined to provide a cumulative body of evidence to evaluate the effectiveness of TEACCH. In acknowledgement of the difficulties associated with the evaluation of any study of effectiveness in Autism (which according to Mesibov, 1988 'is compounded by the organic nature of Autism which does not lend itself to cures or clearly defined milestones') the use of multiple outcome criteria has been adopted as the only reasonable approach to evaluating this method of intervention.

PROJECT MANAGEMENT

The study was managed by a Joint Steering Group consisting of representatives from the DHSS (Northern Ireland), PAPA, the South Eastern Education and Library Board, the Eastern Health and Social Services Board, the Down and Lisburn Health and Social Service Trust and the University of Ulster.

THE RESEARCH TEAM

Two core members were identified to conduct the study. Professor David Sines (University of Ulster) supported by Mr Kenneth Moore who acted as Research Officer to the project. Two Research Assistants - [Jennifer Creegan and Christine Lavery assisted in the administration of the parent interviews.)

STUDY DESIGN

The study was designed in five related stages:

STAGE ONE

This stage of the study involved the collection of informal data relating to the impact that TEACCH has had on all children, families and teachers since its inception in the area. Data was collected from a variety of sources and involved the collection of information from families, carers and professionals who were involved in the use of TEACCH since January 1991 (for example evaluation reports of workshops; letters from parents, professionals and managers and other related evidence - e.g. anecdotal comments).

Four of the five members of the Project Team also provided a record of their own perceptions of both the history and effectiveness of TEACCH.

STAGE TWO

The second stage involved the collection of data from all parents/carers, professionals and project staff (associated with the nineteen children selected for involvement in the project) in respect of their evaluation of the effectiveness of TEACCH following the administration of a postal questionnaire (and personal interview for parents). A 100% response rate was achieved from the nineteen parents. Of the 53 professional support staff identified as working with the 19 children and seven adults included in the central study, 28 returned questionnaires thus resulting in a 53% response rate. Of the 17 people identified as directly involved in the administration of TEACCH methods 11 replied providing a response rate of 65%.⁴

STAGE THREE

This stage of the evaluation involved the rating of two TEACCH structured classrooms in the South Eastern Education and Library Board project area against the Division TEACCH classroom checklist (see Appendix 2). The checklist was administered on a self-report basis by class teachers and was validated by a member of the research team as part of an 'on-site' visit.

STAGE FOUR

The fourth stage of the evaluation involved a convenience sample of 19 pupils across the four local SLD schools in the South Eastern Education and Library Board area and one additional child from another Education and Library Board area (from the 'control school'). Pupils were selected by the TEACCH Team against the following criteria:

- * All subjects were rated as having a diagnosis of Autism using the C.A.R.S. assessment scale;
- * All subjects were in receipt of TEACCH (supported by a member of the Project Team) preceded by the completion of a baseline PEP/AAPEP;
- * Parental/Carer consent had been provided.

A total of nineteen pupils (plus one control pupil) in four schools were identified for inclusion in the study. Data was collected for all twenty pupils. In addition seven adults were included as a separate cohort.

A comparison was made between each subject's baseline and post-baseline PEP/AAPEP (with a minimal interval of one year between the two) and class notes and records were also examined. Where available, psychometric test results were also compared. Evidence was collected from student files in respect of primary and secondary diagnoses, the severity of Autism and significant medical, educational and psychological factors. Case files were compiled on each subject by the Project Team.

STAGE FIVE - THE ADULT STUDY

The adult sample was selected following consultation with the local Day Service and the responsible Consultant Clinical Psychologist. A total of six subjects were diagnosed as having Autism and the seventh had a non-specific communication related disability. All seven were in receipt of TEACCH which had been introduced at the Day Service in 1993. Both baseline and post-baseline AAPEP assessments were provided for comparison. Comprehensive files for each student were also analysed. Evidence was collected from student files in respect of primary and secondary diagnoses, the severity of Autism and significant medical, educational and psychological factors. All parents associated with the seven subjects were interviewed and data was presented from professional support staff (following completion of postal questionnaires).

ANALYSIS OF DATA

Quantitative data was coded, prepared and stored on the University UJVAX mainframe computer and was analysed through the use of the SPSSx software package.

Qualitative data arising from the study was analysed through the use of conventional methods; recurrent themes arising from the personal interviews were isolated, grouped and a relational data-base was developed.

RELIABILITY AND VALIDITY

The reliability and validity of the research instruments were tested through the use of both face and content validity. The instruments were also tested with a variety of cohort groups within the study. Inter-rater reliability between interviewers was also assumed.

The research instruments were piloted at one School and with members of the Project Steering Group and Project Team and suggested modifications were included in the final questionnaires. Apart from re-wording ambiguous questions, a range of supplementary questions were included following consultation with the Department of Health and Social Services.

Issues relating to the validity of results arising from the comparison of PEP/AAPEP scores raise questions from several perspectives. First, although a control group was included in the children's study it proved to be impossible to generalise from the results obtained since only one child (at the control school) was found to meet the specific criteria for inclusion in the study. Secondly, the extent to which actual developmental progress and behavioural change may be attributed to the application of TEACCH methods (as opposed to expected change related to chronological age or other factors) is unknown and is considered to be unquantifiable in a non-longitudinal study of this nature. Finally, some children proved to be 'untestable' against established psychometric assessment criteria, hence the current study was singularly reliant upon PEP/AAPEP test results.⁵ Pre and post psychometric test results were available for only three of the children and one adult member of the sample. The remainder were already in receipt of TEACCH at the commencement of the evaluation project.

CONFIDENTIALITY

All respondents were advised that information provided would be confidential and all questionnaires were coded to ensure that this was maintained. Data was stored securely at the University of Ulster and access to electronically held data records was restricted to one member of the research team.

Issues relating to confidentiality were monitored by the Project Steering Group; no specific ethical issues were identified.

TIME SCALE

June 1994 - December 1995 - Project Design:

January 1995 - December 1995 - Fieldwork and Data Analysis (all stages)

January 1996 - March 1996 - Preparation of final report

April 1996 - Dissemination.

CHAPTER 3

THE CHILDREN'S STUDY

THE SCHOOLS and the CHILDREN'S PROGRESS

Introduction

This chapter considers the nature of the five schools included in the main study⁶ and presents the results of the pre-and post baseline performance results arising from the 'Psychoeducational Profile (PEP)' tests (see below). Other data arising from analysis of the children's class files and teacher reports is also reported. Three specific educational models have been selected for comparison:

- 1- The provision of TEACCH in **structured classrooms supported by TEACCH trained teachers.**
- 2- The provision of TEACCH in **integrated classrooms supported by TEACCH trained teachers.**
- 3- The provision of TEACCH in **integrated classrooms supported by non-TEACCH trained teachers.**

The Children - profiles

Twenty children were included in the main study, all of whom had varying degrees of Autism and intellectual impairment.

One fifth (n=20) of the sample were female (20%) compared to the remaining sixteen who were boys (80%)⁷. Their age/sex profile is presented in table 3.1 below:-

Table 3.1 - Age/Sex Profile - Children (n=20).

Age ^{8/}	4	5	7	8	9	10	11	12	13	14	15	16
Sex												
Male	1	1	2	1	2	1	1	1	2	1	1	2
Female	-	1	1	-	1	-	-	-	-	-	-	1

The results presented in Table 3.1 show that there is an almost even distribution of ages within a range of 4 - 16 years.

All children had received a formal educational assessment and evidence of their 'statements'⁹ was included in their personal files. Only six children were reported as having 'significant' associated medical conditions (four were noted to have severe epilepsy and two had physical impairments). Evidence of formal assessments by Educational Psychologists was included for fifteen children (75%) and each disclosed report recommended that the child concerned would benefit from 'structured teaching' as a result of their learning disability and associated Autism. Systematic class teacher reports were provided for each of the children.

Psychometric assessments were provided by Clinical Psychologists for twelve of the children (60%). The psychometric results provided evidence of equivalent mental age at the time of testing. Follow up assessments were possible in only three cases for comparison as the remainder commenced TEACCH prior to the commencement of the TEACCH Project.

All of the children attended five SLD schools, eight of whom required the additional structure provided by designated TEACCH structured classrooms (designated as schools '1 and 2' in the present study) and were supported by TEACCH trained teachers. The children selected from the third school were integrated in a mainstream class within the school and were supported by a TEACCH trained teacher¹⁰. The one pupil in School '4' was educated as the only person with Autism in a designated behavioural unit and was supported by a TEACCH trained teacher. The fifth school was the school 'control school' (School '5') and the one identified child with Autism included in the study was integrated within a 'generic' class group and was taught by a non-TEACCH trained teacher. Thus of the twenty children:

8 required the support provided within a TEACCH structured classroom in Schools 1 and 2 supported by a TEACCH trained teacher.

7 were educated in integrated classes in Schools 1 and 2 supported by a TEACCH trained teacher.

3 were educated in an integrated class in School 3 supported by a TEACCH trained teacher.

1 was educated in an integrated behavioural unit in School 4 supported by a TEACCH trained teacher.

1 was educated in the control school (School 5) in an integrated classroom without a TEACCH trained teacher.

The distribution of the children between each school is presented in Table 3.2:-

Table 3.2: The distribution of pupils between schools (n=20).

School 1	11
School 2	4
School 3	3
School 4 (behavioural unit)	1
School 5 (control)	1

Measuring the severity of Autism

The severity of Autism was assessed by completion of the administration of The Childhood Autism Rating Scale (C.A.R.S.), (Division TEACCH, North Carolina). The test includes a fifteen item behaviour rating scale that aims to assist in the identification of Autism. The test is based on established diagnostic processes (Schopler, 1986) and provides a 'cut-off' score that distinguishes non-Autistic children and those with other developmental delays from those with varying degrees of Autism.

The ratings include assessment on sub-scales:

- * relating to people
- * imitation
- * emotional response
- * body use
- * object use
- * adaptation to change

- * visual response
- * fear or nervousness
- * taste and smell
- * touch response
- * listening response
- * verbal and non-verbal communication
- * activity level and level
- * consistency of intellectual response.

The rating scale ranges from scores of 15 - 30 (non-autistic), 31 - 36 (mild - moderate Autism) to 37 - 60 (severe Autism). The results obtained from the present study show that seventeen (85%) of the 20 children were rated as being 'severely autistic' (scoring a mean of '48') whilst the remaining three children (15%) each scored '32', thus placing them at the lower end of the 'mild - moderate' autistic scale.

Results arising from analysis of the Psychoeducational Profile (PEP) scores

The Psychoeducational Profile (Schopler, 1988) is a developmental assessment of children with Autism or related developmental disorders. The assessment tool contains an inventory of behaviours and skills designed to identify 'autistic related' learning patterns. The test is specifically designed for use with children at the lower range of ability and as such has been adopted for use in the present study to demonstrate pupil progress following the administration of pre and post PEP tests.

Used in assessment, the PEP test provides information relating to pupil progress on developmental functioning in Imitation, Perception, Fine Motor, Gross Motor, Eye - Hand Integration, Cognitive Performance, and Cognitive - Verbal areas. The PEP also identifies degrees of behavioural abnormality in Relating and Affect (co-operation and human interest), Play and Interest in Materials, Sensory Responses, and Language. Following test administration, scores are tallied and a developmental profile is produced. Age range estimates are then calculated in order to provide an estimate of 'developmental age'. A behavioural profile is also computed.

The PEP tests were administered by members of the TEACCH project team at the commencement of the child's admission to the TEACCH programme and were repeated at least once at the end of the evaluation period, (in 1995). The average interval between the administration of the two PEPs was noted to have been 24 months within a range of 12 and 38 months.

1- Behavioural change

The results arising from the analysis of behavioural change (between the pre and post PEP tests) are presented in this section. The results are presented school by school in order to facilitate comparability.

School 1

Six of the eleven children demonstrated an average increase of 5 score points¹¹ across the range of sub-scores for the absence of inappropriate behaviours. Two demonstrated no change in this area whilst five others showed an increase in the incidence of inappropriate behaviours (each achieving an average of 3 additional score points).

There was also an observed reduction in the number of 'moderate' inappropriate behaviours with five children, (averaging a reduction of six score points). One child demonstrated no change in scores whilst five others 'gained' an average of 2.5 additional points.

Six children demonstrated a reduction in the incidence of severe inappropriate behaviours (with an average reduction in score points of 5.5), one child showed no change in this area. Four children actually increased the number of severely inappropriate behaviours (scoring an average of 4 points compared to their previous PEP test).¹²

School 2

Two of the four children demonstrated an average increase of 6 score points across the range of sub-scores for the absence of inappropriate behaviours. One demonstrated no change in this area whilst the remaining pupil showed an increase in the incidence of inappropriate behaviours (scoring an average of 2 additional score points).

There was also a significant reduction in the number of 'moderately' inappropriate behaviours with three of the four children averaging a reduction of seven score points. The remaining child demonstrated a 'gain' of 4 points.

Three of the children demonstrated a reduction in the incidence of severely inappropriate behaviours (with an average reduction in score points of 10) and the other child showed an increase of four points in the number of severely inappropriate behaviours.

School 3

Two of the three children showed an average increase of 9 score points across the range of sub-scores for the absence of inappropriate behaviours. The other child demonstrated no change in this area.

There was also a significant reduction in the number of 'moderately' inappropriate behaviours with two of the three children averaging a 5 point reduction. The remaining child 'gained' a total of eleven points (but reduced his score of 'severely inappropriate behaviours' by the same number).

All three children demonstrated a reduction in the incidence of severely inappropriate behaviours (each with an average reduction of 8 score points).

School 4

Only one child was included in the sample from this school and was educated in a behavioural unit (as the only pupil diagnosed as having Autism) supported by a TEACCH trained teacher. He demonstrated an average increase of 3 score points across the range of sub-scores for the absence of inappropriate behaviours and a significant reduction in the number of 'moderately' inappropriate behaviours (averaging a reduction of nine score points across the range of sub-scores). There was a commensurate decrease in the incidence of 'severely' inappropriate behaviours (with an average reduction of 12 score points).

School 5

One child was included in the control sample from this school. He demonstrated an average improvement of 3 score points across the range of sub-scores for the absence of inappropriate behaviours and a score of 4 points in the number of reported 'moderately' inappropriate behaviours. There was an overall decrease in the incidence of 'severely' inappropriate behaviours of 8 score points. However, reports from the child's class teacher suggest that there had been a 'significant' deterioration in the incidence of co-operative behaviour and a general reduction in skill development during the reporting period between the pre and post PEP tests.

Section summary

The results relating to behavioural change demonstrate a significant reduction in both moderately and severely inappropriate behaviours and the related emergence of substitute appropriate behaviours. This appears to be consistent across the range of sub-scores. Conversely the 'control' child attending in School 5 demonstrated a 'significant' deterioration in behaviour.

Anecdotal evidence provided by parents, professionals and class teachers also suggests that there had been a significant reduction in inappropriate behaviours. Similar evidence was found following analysis of the childrens' class notes and school reports where all but two of the twenty children (in Schools 4 and 5) were noted to have improved in respect of their behaviour.

2- Developmental change

The results arising from the analysis of developmental change (between the pre and post PEP tests) are presented in the second section of this chapter. The results are presented by school and for each separate test score category:-

Table 3.3:- Average developmental gain and increase in scores by school

Sub-Scale (n=20)	Imitation	Perceptio n	FineMoto r	Gross - Motor	Eye- Hand	Perfor- mance	Verbal	Dev'mntal Score	Dev'mntal Age
School 1 n = 11	+9.9	+3.9	+11.4	+8.5	+7.4	+11.6	+8.8	+19.1	+10.55
School 2 n = 4	+14	+14	+15.7	+14.7	+9.7	+9.7	+7.5	+25.5	+9.5
School 3 n = 3	+12.3	+21	+12	+17	+7	+15	+10	+25.66	+10.1
School 4 n = 1 (behavioural class)	- 3	+15	+11	+8	+10	+4	Nil	+19.0	+6.4
School 5 n=1 control	-5	-4	+4	+2	+3	-1	+1	-1	no change

Analysis of the results contained in Table 3.3 suggests that significant developmental gains had been achieved for all children across the range of sub-scales included in the Psychoeducational Test for Schools 1,2,3 and 4. The child included as a 'control' in (School 5) demonstrated an overall reduction of one developmental point at the post-PEP test.

Analysis of teachers' notes or class files also yielded additional evidence of improvement in developmental gain for the pupils. Teachers noted that 'impressive' or 'considerable' improvements were made by 13 of the children (65%) in all developmental sub-scales. Corresponding improvements were also noted amongst this group between the pre and post psychometric test results for the three children for whom such comparative results were made available. 'Some' improvement was also noted for a further five (25%) of the children. No improvement was recorded for the remaining two pupils, of whom one was included in the 'control' group.

Using TEACCH at home

Analysis of pupil files and teacher records provided evidence of the extent to which home-school liaison was facilitated. No evidence of regular home visits was available for eight of the children. Nine families were reported to receive 'very regular home visits' (with an average of one visit every six weeks) whilst a further three families had 'regular' visits (on average once a term). In eleven of these cases teachers provided support and guidance to

parents on the implementation and maintenance of TEACCH. In each of these cases teachers also engaged in systematic evaluation or 'tracking' of pupil progress. No evidence of systematic implementation or evaluation of TEACCH was provided for the remaining nine children and their families (45%). Eight of the families also appeared to receive regular home visits from other professionals such as social workers, community learning disability nurses and non-TEACCH related Speech and Language Therapists and in a number of cases home based interventions were supervised by a consultant clinical psychologist and TEACCH trained speech and language therapist.

Schools One and Two - evaluating the extent to which the two TEACCH structured classrooms adhered to TEACCH principles

A member of the research team visited the TEACCH structured classrooms in Schools 1 and 2 and observed teacher-pupil interactions. Class teachers completed a questionnaire designed to identify the extent to which the principle features of the TEACCH model had been implemented (see Appendix Two). The results were validated following the observational visit to the school. This section of the report considers the results arising from this exercise.

School One

TEACCH was implemented at this SLD school in 1990. A TEACCH classroom was established in 1992. Two teachers are TEACCH trained. The children were described as being 'severely autistic' with varying degrees of intellectual impairment. The curriculum was described as 'closely following the 'TEACCH model'. Five of the children included in the present study were educated in the TEACCH structured classroom at this school.

Physical Structure/Classroom Schedules and Work Systems

All twenty items included in the first two sub-scales were achieved and were in place in 1992.

Individualised Communication Systems.

Six of the seven goals were achieved in 1993. The one outstanding area, the provision of functional systems of communication, was identified as an area for further development. As such the need for additional emphasis and advice in this area was recognised.

Personal Goal Plans

All eleven items were achieved by 1992 and were reviewed annually.

Structured Approach to Behaviour Management.

Eight of the ten items have been consistently achieved. 'Restrictive behavioural programmes' were not in use and reviews of behavioural programmes were only held with parents if the problem was considered to be significant. Access to advice for behavioural management was also available in this school from a consultant clinical psychologist.

Plans for Parent Involvement.

Parents did not work with their children in the classroom. Daily notebooks were in use and acted as a vehicle for home-school communication.

Maintenance of the Model

All seven items were achieved in 1992. Regular support and consultancy was provided by a member of the TEACCH project team.

School Two

TEACCH was implemented at this SLD school in 1992. A TEACCH classroom was established at this time. Three of the children included in the present study were educated in the TEACCH structured classroom at this school.

One teacher is TEACCH trained and works with 'severely autistic children'. The curriculum was also described as 'closely following the 'TEACCH model'.

Physical Structure/Classroom Schedules and Work Systems

All twenty items included in the first two sub-scales had been achieved and have been incrementally developed and implemented since 1992. The class followed daily schedules and a weekly timetable. The teacher placed considerable emphasis on teamwork both within and outwith the classroom.

Individualised Communication Systems.

All goals were achieved between 1993 and 1994.

Personal Goal Plans

All eleven items were achieved and have been consistently implemented since their inception in 1992. All goal plans were reviewed at least annually (with the full involvement of parents).

Structured Approach to Behaviour Management.

All ten items had been consistently achieved both within the classroom and throughout the school. All programmes were developed in consultation with the consultant clinical psychologist.

Plans for Parent Involvement.

The school described this as an 'area of strength'. Parents regularly visited the school and home visits were undertaken. Daily diaries were used and parents were consulted regularly about the design and implementation of programmes. Parents were encouraged to work with their children in the classroom and assisted with leisure activities.

Maintenance of the Model

All seven items were achieved by 1993. Regular support and consultancy was provided by a member of the TEACCH project team.

Characteristics of Schools 3, 4 and 5

Schools 3,4 and 5 were not formally evaluated in respect of their adherence to TEACCH principles due to the integrative classroom approach adopted for the children included in the present study. A general description of relevant features of the three schools is however provided.

School Three

TEACCH was implemented at this SLD school in 1993. A TEACCH classroom was established in 1992 but none of the three children included in the present study attended this class but were integrated in a mainstream class within the school were supported by TEACCH trained teachers. The children were described as being 'severely autistic'.

Teachers at this school reported that knowledge about TEACCH was continuing to develop and that there was a reported ongoing 'build up' of materials to assist in its implementation. No formalised system existed to include classroom assistants in 'teacher support groups' and no formal agreement had been negotiated for the provision of training events for staff

and parents. Daily notebooks were in use and acted as a vehicle for home-school communication. Termly meetings were also held with parents.

Learning objectives were reported to have been developed following detailed observation of pupil need and carer response. The school also reported considerable improvements with their pupils' behaviour although ongoing support was required for one child whose behaviour was particularly challenging.

Regular support and consultancy was provided by a member of the TEACCH project team.

School Four

TEACCH was implemented at this SLD school in 1993/4. No formal TEACCH structured classroom currently exists at the school. The one child included in the present study from this school was educated as the only pupil with Autism in a designated 'behavioural unit'. The teacher was TEACCH trained. The child was described as being 'severely autistic'. Despite the fact that no structured TEACCH classroom was provided at the school a significant number of TEACCH principles had been adopted and implemented.

All children within this class were reported to possess individual goal plans and a structured approach to behavioural management was in place. Weekly work schedules were available for specific children and work systems were arranged in accordance with TEACCH principles.

Consultation with parents was limited to the provision of parents meetings/groups, telephone liaison and annual reviews. Whilst parents did not work with their children in the classroom it does appear that parents were consulted regularly regarding their children's programmes. Daily notebooks were also in use and provided a valued source of home-school communication. Termly meetings were held with parents.

Regular support was provided by a member of the TEACCH Project team as part of her usual remit as a Support Teacher for children with 'Pervasive Developmental Disorder'.

School Five

The fifth SLD school was included in the study as a 'control' and was located outwith the geographical area of the main study. No TEACCH classroom existed at this school and the single pupil (with Autism) selected for inclusion in the study was educated in a generic classroom without the support of a TEACCH trained teacher. The children had severe learning difficulties, one of whom had a diagnosis of Autism. No formal teaching system based on TEACCH principles had been adopted for implementation in the classroom.

Designated areas were not provided for individual group work, individual work, play or leisure. No weekly schedules were available to the children, work systems were not arranged in accordance with TEACCH.

Individual teaching plans were available for the children but there was no written evidence of provision for individual behavioural management programmes. Systems had not been negotiated to communicate with parents in respect of individual programmes. Parents did not work with their children in the classroom.

Regular support and consultancy was not provided from any member of the TEACCH project team as the child in this school was included in the study as a 'control subject' in a school located outwith the South Eastern Education and Library Board area.

Section summary

This section reported the structural elements of each of the five classrooms featured in the present study. Evidence was collected following personal observation of each class, self-reports from teachers and, in the case of the two structured classrooms in Schools 1 and 2, from an objective evaluation of the extent to which they were rated against criteria included in the 'TEACCH Structured Teaching Model Classroom' questionnaire (see Appendix Two).

TEACCH was implemented for pupils in Schools 1,2 ,3 and 4 in a range of integrated classroom settings. In all cases the amount of emphasis placed on structured environmental design (and structured programme response) was determined by the actual needs of each individual child.

No specific structural or process adaptation had been made to meet the needs of the child in School 5 (the control school) in accordance with TEACCH principles.

As one would expect, the extent to which each school had implemented TEACCH was dependent upon the priority and investment that has been given to its implementation and maintenance.

A Comparison of test results between schools using structured classes, integrated classes and TEACCH trained teachers.

All of the children in schools 1, 2, 3 and 4 had been assessed in respect of the extent to which structured environmental and procedural responses were required to meet their specific needs. Eight of the children were educated in structured classrooms in Schools 1 and 2. Eleven others were placed in integrated classes in Schools 1,2,3 and 4¹³ and were using TEACCH. The one remaining child was a member of an integrated class where TEACCH was not in use.

Comparison of PEP performance scores for the twenty children demonstrates significant variance between the three models of educational delivery. For example the average developmental score gain for the eight children in the structured classrooms was 15.6 compared to 25.7 for the children in the integrated classrooms where TEACCH was in use. (a 39% difference). Changes in developmental age yielded even more significant results with the children in the structured classrooms gaining an average of 5.75 months compared to 13.27 for those in integrated classrooms (a gain of 66%). These findings were also supported by psychometric test results obtained for the three children for whom such comparative data was available.

The results were consistently similar across the range of PEP sub-scale scores for all areas (with the exception of Gross Motor performance) and an average increase in score of 65% was found for children in the integrated classroom settings (an average increase of 25% was found for the same children in respect of gross motor skill development).

Conversely no significant differences were found in respect of behavioural change for those children educated in either setting. Changes were found to be constant across Schools 1,2 and 3.

Some minor variations were found in respect of overall performance scores for School 4 (see table 3.3) and notable differences were found for the 'control' child in School Five where an actual deterioration in developmental score and behavioural presentation was reported.

One other significant variable related to the severity of the childrens' Autism and intellectual ability. Unfortunately it was not possible to compare levels of intellectual functioning across the five schools but comparison of C.A.R.S. scores (relating to the severity of Autism) suggests that those children in the structured classrooms were considered to be more 'severely Autistic' compared to those children in the integrated classrooms¹⁴. However, even after making an allowance for this factor it does appear that higher scores were obtained at the post-PEP test by those pupils who were educated in integrated classrooms supported by TEACCH trained teachers.

Discussion

The results presented in this chapter suggest that all but one child made positive gains in respect of the development and maintenance of skills and abilities and in the reduction of problem behaviour. The most significant factor appears to be that all of these children were supported by TEACCH trained teachers in a range of classroom settings in four designated SLD schools. Gains across a range of PEP sub-scale areas appear to be consistent for the children in Schools 1,2,3 and 4.

Those children who were integrated within generic classes appeared to significantly gain new skills and abilities. Those in structured classes also made considerable gains, but not to the same extent as their peers (a factor that might be attributed to the fact that the children in the structured classes were generally more severely intellectually impaired). No differences were found to exist between Schools 1,2,3, and 4 in respect of reported behavioural change.

TEACCH evolved as an adaptable approach to meet the specific needs of individual clients and as such the method must be flexibly deployed in accordance with each person's assessed intellectual, cognitive, emotional and developmental needs. Those children who are currently attending structured classes have been assessed as requiring a high degree of structure and routine. As such they are more likely to be more intellectually impaired. Conversely those children educated in integrated classrooms are, for the most part, less intellectually impaired and thus more likely to be able to acquire significantly more new skills and abilities. This rationale may provides an explanation for the difference in PEP test results between those children educated in structured classrooms and those in integrated class settings.

The results demonstrate that considerable gains had been achieved by nineteen of the children in the four schools where TEACCH methods were in use. These results are particularly significant when compared to the results obtained in respect of the 'control' pupil in School 5 (see Table 3.3).

CHAPTER 4

THE CHILDREN and ADULT STUDY THE PROFESSIONAL PERSPECTIVE

Introduction

Questionnaires (see Appendix 1) were distributed to 28 professional staff who worked with the children (n=19) and adults (n=7) included in the study and their families.¹⁵ The professional backgrounds of respondents is presented below:

- 2 consultant psychiatrists**
- 1 consultant pediatrician**
- 1 senior community medical officer**
- 2 clinical psychologists**
- 3 educational psychologists**
- 5 teachers**
- 3 social workers**
- 3 community learning disability nurses**
- 6 residential care staff**
- 2 day care workers**

Twenty eight questionnaires were returned out of a total of 53 (representing a response rate of 53%). Eight letters were received from educational psychologists and teachers indicating that they did not have any direct or indirect experience of TEACCH and therefore felt it inappropriate to respond. Thus allowing for this adjustment it would appear that the actual response rate was significantly higher (63%) amongst those professionals working with persons in receipt of TEACCH. The results arising from the questionnaires are presented in this chapter.

Personal involvement with TEACCH

Eleven respondents were regularly engaged in supporting the implementation of TEACCH at school/work and home (or in residential care facilities). Six others stated that they were involved in monitoring client progress. The other two respondents were employed in a supervisory capacity and worked with approximately nineteen TEACCH pupils on a 'regular basis'. Six expressed their involvement as direct implementation of TEACCH in residential and day care settings whilst a further three stated that they were involved in the provision of TEACCH training or research.

Eight respondents were engaged in the implementation of TEACCH with one client each week, two implemented TEACCH with two persons each week and five worked with one client intermittently. The other respondents were employed in a supervisory capacity and worked with between two and nine persons regularly.

The amount of time engaged on TEACCH each week was estimated as being 28 hours for nine respondents, 15 hours for six others, 5 hours for five persons and between 1-3 hours for the remaining respondents.

Six staff reported that they had been using TEACCH for four years, twelve for one year and the remainder for between one and nine months. Seventeen respondents had worked for more than five years with people with Autism and four reported that they had worked with this client group for between three and four years. Seven others had worked with people with Autism for between one and two years.

Nine respondents rated their awareness/knowledge of Autism as 'very considerable', eight as being 'considerable' and eleven as 'reasonable'.

Client access to TEACCH

Eleven of the twenty eight (39%) respondents considered that carers (in general) know who to contact to find out more about TEACCH, whilst all but three (89%) believed that professionals were aware of available access routes. Two respondents considered that the distribution and availability of information about TEACCH was 'very effective', seven 'considerably effective' and ten 'effective'. Five others stated that they felt that the availability and dissemination of information was 'not effective' and five had not reached an opinion one way or the other.

Eighteen staff explained that they had been introduced to TEACCH by clinical psychologists, three others learnt about the method from teachers, four reported that they had learnt about it following attendance at workshops/courses and five had heard about it from the Autism charity PAPA.

The respondents reported that their clients had gained access to TEACCH through the following referral sources:

- Clinical Psychologists - 18 respondents (64%)**
- Teachers - 15 respondents (54% respondents)**
- Educational Psychologists - 15 respondents (54%)**
- Speech and Language Therapists - 9 (32%)**
- PAPA - 7 respondents (25%)**
- Day care workers - 6 respondents (21%)**
- Community Medical Staff - 6 respondents (21%)**
- Community learning disability nurses - 5 respondents (18%)**
- Consultant medical staff - 4 respondents (14%)**
- Direct self referral - 4 respondents (14%)**
- Residential care staff - 2 respondents (7%)**

Initial expectations about TEACCH

Nine respondents stated that they had little or no prior expectations about TEACCH, seven stated that they held high aspirations for the reduction of negative behaviours, five were hopeful that communication skills would improve and three mentioned that they felt that it would provide more structure for clients and their families. Two persons reported that they were originally sceptical about the method, believing it to be expensive to implement with little proven gain for clients. In response to a question about whether these initial expectations had changed following personal experience of TEACCH, eleven (39%) stated that they had not changed their opinions whilst the remaining seventeen (61%) responded positively to this question stating that they had:

- witnessed positive advantages and improvements in their client's behaviour and skills (7 respondents)**
- understood more about the method (5 respondents)**
- gained confidence in its application - (3 respondents)**
- noted its potential for flexibility and individual adaptation for individuals (2 respondents)**

The effectiveness of TEACCH

Respondents were asked to rate their overall perceptions of the effectiveness of TEACCH.¹⁶ Eleven (39%) rated it as 'very effective', thirteen (46%) rated it as being 'considerably effective' whilst the remaining four persons (15%) stated they considered it to be 'somewhat effective'.

Effectiveness was also rated against a number of criteria relating to improving self-help skills, social skills, reduction of problem behaviours, reduction of obsessional behaviours, enhancement of co-ordination skills, improvement of fine and gross motor skills, enhancement of communication skills and improved concentration. The results are presented in Table 4.1:

Table 4.1 Professional perceptions of the effectiveness of TEACCH:

n=28	Very Effective	Consid'bly Effective	Effective	Not Effective	Don't Know
Self-Help Skills	3	7	10	3	4
Social Skills	3	10	8	4	3
Problem Behaviour	9	8	6	3	2
Obsess'al Behaviour	5	7	9	3	4
Gross Motor Skills	1	3	11	4	9
Fine Motor Skills	1	9	11	3	4
Communi-cation	5	5	14	2	2
Concent-ration	4	14	10	-	-

Examination of the results included in Table 4.1 suggest that respondents rate TEACCH to be significantly effective in most sub-areas. Closer examination reveals that this is particularly true for self help skill development across a range of areas of daily living. As with other cohort groups included in the present study (parents and TEACCH staff) several (6) respondents noted that it was difficult to attribute all of the successes in this area to TEACCH and suggested that some gains may have occurred as part of the natural maturation process.

Significant changes were reported by 82% of respondents in the reduction in problem behaviours. Similar successes were reported in the reduction of obsessional behaviours.

Gross motor or mobility skills were noted to have improved by fifteen respondents (54%) although, as was reported by parents and TEACCH staff, this result should be considered with caution since twelve professional staff stated that no difficulties were reported with mobility prior to the implementation of TEACCH.

It was however, (as might be expected of a method that emphasised the importance of promoting communication), in the area of communication that the greatest improvements were noted with all twenty eight respondents reporting that significant improvements had been noted amongst their clients since the implementation of TEACCH.

Respondents also reported improvements in their pupil/client's progress in the areas of independence, quality of life, development of new skills, maintenance of existing skills and abilities and interaction skills. These results are reported in Table 4.2:

Table 4.2: Professional perceptions of improvement in skills and quality of life.

n=28	Great Difference	Some Difference	Little Difference	No Difference	Don't Know
Independence	7	11	8	2	-
Quality of Life	9	18	-	-	1
Skill Development	4	18	2	3	1
Skills Maintenance	4	18	3	1	2
Interaction	2	15	8	1	2

Analysis of the results presented in Table 4.2 demonstrate that respondents rated TEACCH to have made a significant difference in all sub areas. This is particularly true in the areas of skill development and maintenance and quality of life with twenty seven of the twenty eight respondents reporting that TEACCH had made a significant difference to the quality of life experienced by their clients.

Specific comments related to the extent that clients had acquired more structure and predictability in their lives (reported by twelve respondents) thus reducing problem behaviours.

The overall rating provided by the professionals for TEACCH ranged from eight respondents (29%) stating that they considered it to have been 'very good', nine (32%) considering it be 'good' through to eleven regarding to have been 'quite good' (39%).

Using TEACCH at home

TEACCH was primarily designed for implementation in the home setting outwith the structured classroom design model. respondents were therefore asked to assess the extent to which they considered that TEACCH methods had been implemented at home with the children. Four respondents reported that they considered that TEACCH had been integrated at home to a 'considerable' extent, sixteen others rated this to have been achieved 'to some extent' whilst eight persons felt that home based liaison at home at not been achieved at all. As with other groups included in the study (parents and TEACCH staff) professional staff stated that implementation at home was dependent upon the co-operation of parents and other carers. All stated that this was an area for further investment and development. In acknowledgement of this six persons noted that 'great' potential existed for the transfer of TEACCH methods to settings other than the TEACCH classroom, nineteen others rated this potential as being 'considerable' whilst five others did not consider it applicable for implementation out with the classroom. One respondent

confirmed this position by stating that this was not achievable without 'major environmental manipulation and investment in staff training'.

The advantages and disadvantages of TEACCH

Positive advantages relating to TEACCH were noted as being an observed reduction in behaviour problems (8 respondents), the provision of structured routines (8 respondents), improvement in communication (6 respondents), and its potential for implementation and ownership by parents and carers. Other comments were also provided about the extent to which it enhanced client concentration and reduced perceived stress amongst carers (4 respondents)

Nine respondents reported that they were aware of the direct influence that had been exerted following the introduction of TEACCH for five people with learning disabilities and the prevention of their long-term admission into long-stay residential care (three adults and two children). They reported that TEACCH had been a significant reason for the continuation of their care in the community. In all cases it was asserted that there had been a significant reduction in inappropriate and challenging behaviours. They also noted that carers had reported reduced stress and the development of improved coping strategies. The main weaknesses of TEACCH were reported as being: time consuming (4 respondents), difficulty in transferring the approach to the home/care setting (3 respondents) and the lack of additional training and ongoing support for TEACCH at home (3 respondents). Three staff considered it to 'isolate clients' from mainstream activities at school or in the day centre whilst two people reported difficulties in maintaining client motivation in the system. Two others mentioned difficulties with 'imposing' TEACCH methods within the context of home-life/family routines. Seven respondents also requested that more staff be appointed to work with TEACCH at school and in day care settings and emphasised the importance of school/work and home based liaison.

Respondents reported the following gaps in the present provision of TEACCH:

Inadequate preparation for parents (5 respondents)

lack of diagnostic and pre-school services (4 respondents)

restricted training opportunities for staff and parents (4 respondents)

Inadequate preparation for parents (5 respondents)

under-developed home based liaison services (5 respondents)

under-resourced provision for TEACCH in adult day care/residential services (4 respondents)

Staff reported that they were unaware of any occasions when TEACCH was unable to be offered to 'referred' clients.

Preparation and training for TEACCH

Twelve respondents stated that they were not aware of arrangements for the preparation and training of parents/carers of TEACCH clients. Ten reported that carers had attended workshops and training days and five others mentioned the importance of home-based liaison as a means of introduction to the programme. Only seven out of the twenty eight respondents considered parents/carers to be adequately involved in the implementation of TEACCH.

Eighteen respondents had attended a preliminary day conference on TEACCH and all found it to have been either 'considerably' or 'very' useful. Nine also reported that they had participated in a three day focused workshop and sixteen confirmed their participation in a five day TEACCH workshop event. Once again all respondents rated the workshops as being either 'considerably' or 'very' useful.

Recommendations for improving the quality and effectiveness of TEACCH

Twenty five respondents stated they had received advice on TEACCH and Autism from members of the TEACCH team. Of these twelve rated this as being 'very effective', seven as 'considerably effective', and six as 'somewhat effective'. Respondents identified the following criteria to be important indicators of the effectiveness of TEACCH:

- Reported client and family well-being - (6 respondents)**
- Evidence of behavioural change (reduced frequency and intensity of difficult behaviours) - (6 respondents)**
- Measured development in skill development and communication - (5 respondents)**
- Reported improvements in concentration and attention - (4 respondents)**
- Reduction of obsessional behaviours and rituals - (4 respondents)**
- Reported improvement in carer expectations and stress levels - (4 respondents)**
- Reduced incidence of institutionalisation - (3 respondents)**

In summary the majority of respondents engaged in the professional support of clients and carers in receipt of TEACCH suggest that they regard it to be an effective method for improving the quality of skills and life for people with Autism. Recommendations for improving the quality of TEACCH were reported as being:-

- The allocation of more staff - 8 respondents**
- The provision of more training for parents, carers and professionals (including awareness evenings) - 6 respondents**
- Improved information and dissemination systems - 4 respondents**
- Extension of TEACCH into day and residential services - 4 respondents**
- Provision of diagnostic and pre-school services - 4 respondents**
- Designation of TEACCH co-ordinators in school and day care settings - 3 respondents.**

CHAPTER 5

THE CHILDREN'S STUDY THE PERSPECTIVE OF PROFESSIONALS INVOLVED in the IMPLEMENTATION OF TEACCH

Introduction

Questionnaires (see Appendix 1) were distributed to the 17 persons who identified themselves as being active in the delivery and monitoring of TEACCH in each of the four schools included in the study in order to obtain information in respect of the quality of TEACCH as perceived by the 'implementation team'. The data was collected following the circulation of a questionnaire to all teachers engaged in the delivery of TEACCH in the four schools included in the study and also to members of the Project Team. Additional information was provided by members of the Project Team in the form of individual written responses and audio-tape recordings.

Eleven questionnaires were returned out of a total of 17 (representing a response rate of 65%). The results arising from this part of the study are presented in this chapter.

Personal profiles and involvement with TEACCH

The following professional groups were represented in the TEACCH implementation group:
TEACCH trained Teachers - 8 (73%)

Speech and Language Therapists - 2 (18%)

Clinical Psychologist - 1 (9%)

Of these four were also members of the TEACCH Project Team (Two teachers, one Speech and Language Therapist and one Consultant Clinical Psychologist)¹⁷.

Four respondents were engaged in the implementation of TEACCH with six pupils each week, two implemented TEACCH with two pupils each week and three worked with one pupil (on a weekly basis). The other two respondents were employed in a supervisory/advisory capacity and worked with approximately nineteen TEACCH pupils on a 'regular basis'.

The amount of time engaged on TEACCH each week was estimated as being 27 hours for two respondents, 22 hours for two persons, 8 hours for three persons and between 5-8 hours for the remaining four respondents.

Three staff reported that they had been using TEACCH for five or more years, two for four years, a further two for three years and the remainder for between one and two years. Seven respondents had worked for more than five years with people with Autism and four reported that they had worked with this client group for between one and two years. Five persons rated their awareness/knowledge of Autism as 'very considerable', four as being 'considerable' and two as 'reasonable'. However all but two reported that they 'were continually learning about the subject'.

Client access to TEACCH

Only five of the eleven respondents considered that carers (in general) know who to contact to find out more about TEACCH, whilst nine (82%) believed that professionals were aware of available access routes. Four respondents considered that the distribution and availability of information about TEACCH was 'very effective', three 'considerably effective' and three 'effective'.

Seven of the staff explained that they had been introduced to TEACCH by one specific TEACCH teacher in the Downpatrick area (a core member of the TEACCH Project Team), three became aware of TEACCH following engagement in research on Autism and two others reported that they learnt about it following attendance at workshops/courses on the method.

The respondents reported that their pupils had gained access to TEACCH through the following referral sources:

Teachers - 8 respondents (73)

Clinical Psychologists - 5 respondents (45%)

Educational Psychologists - 3 respondents (27%)

Speech and Language Therapists - 4 (36%)

PAPA - 2 respondents (18%)

Community Medical Staff - 1 respondent (9%)

Initial expectations about TEACCH

Four respondents stated that they had little or no expectations about TEACCH, seven stated that they had 'high or optimistic expectations', one was 'sceptical about the method' and a further respondent reported that 'she wanted to have the method validated' before expressing an opinion. When asked to rate whether their initial expectations had changed following experience of TEACCH, ten responded positively to this question stating that they had:

witnessed significant behaviour change (3 respondents)

noted its application with 'particularly difficult children' (3 respondents)

understood more about the method (3 respondents)

gained confidence in its application - (2 respondents)

now validated the effectiveness of the approach (2 respondents)

The effectiveness of TEACCH

Respondents were asked to rate their overall perceptions of the effectiveness of TEACCH. Ten (90%) rated it as 'very effective' and the other respondent considered it be 'considerably effective'.

Effectiveness was also rated against a number of criteria relating to improving self-help skills, social skills, reduction of problem behaviours, reduction of obsessional behaviours, enhancement of co-ordination skills, improvement of fine and gross motor skills, enhancement of communication skills and improved concentration. The results are presented in Table 5.1:

Table 5.1: Project staff perceptions of the effectiveness of TEACCH:

n=11	Very Effective	Consid'bly Effective	Effective	Not Effective	Don't Know
Self-Help Skills	5	4	-	-	2
Social Skills	3	3	4	1	-
Problem Behaviour	9	1	1	-	-
Obsess'al Behaviour	7	3	1	-	-
Gross Motor Skills	1	4	2	1	2
Fine Motor Skills	3	5	2	1	-
Communi-cation	5	4	2	-	-
Concent-ration	6	4	1	-	-

Examination of the results included in Table 5.1 suggests that respondents rate the effectiveness of TEACCH as considerable in most sub-areas. Closer examination reveals that this is particularly true for self help skill development across a range of areas of daily living. Four respondents however pointed out that it was difficult to attribute all of the successes in this area to TEACCH and suggested that some gains may have occurred as part of the natural maturation process.

Considerable improvements were also noted in social skill development. Respondents commented on improvements in social interaction (six respondents) and three others mentioned the reduction in stress amongst parents that occurred as an indirect result of improvements in this area.

Perhaps the most significant changes noted by all respondents were reductions in problem behaviours: 3 respondents noted that tantrums had reduced in incidence and intensity, four commented on improvements in tolerance levels and three mentioned that the enhanced structure of the environment accompanying the implementation of TEACCH, had made the child's world more secure and meaningful, thus reducing fear and frustration. Similar results were reported for the incidence of obsessional/compulsive behaviours with all respondents commenting on their effective reduction. One staff member stated that she had found this to be particularly true for one 'very problematic child' whose obsessions had significantly reduced as 'his everyday world had become more varied and active'.

The range of fine motor skills were noted to have improved by nine respondents, all of whom commented on the important changes that they had observed in the reduction in 'clumsiness' in their children. One staff member commented:

'There has been a characteristic 'trickle down' effect in this area with improved behaviour allowing the children to concentrate more on eye-hand co-ordination with the result that skills have further developed. In so doing we have come to realise that patience and consistency are absolute virtues with these children'.

Gross motor or mobility skills were noted to have improved by seven respondents although this result should be considered with caution since six staff stated that no difficulties were reported with mobility prior to the implementation of TEACCH.

Improvements were also reported in concentration with four children being described as now watching television and reading books. However, it was in the area of communication that the greatest improvements were noted. Three staff also mentioned that the children had 'become more relaxed since using the method'.

All respondents reported that the children had made effective gains in all aspects of communication which three persons attributed to the organised environment within which TEACCH is practised, the absence of distractive stimuli, adherence to a 'strong' visual teaching focus/methodology and the provision of focused work stations.

Respondents also reported improvements in their pupil/client's progress in the areas of independence, quality of life, development of new skills, maintenance of existing skills and abilities and interaction skills. These results are reported in Table 5.2:

Table 5.2: Project staff perceptions of improvement in skills and quality of life.

n=11	Great Difference	Some Difference	Little Difference	No Difference	Don't Know
Independence	7	4	-	-	-
Quality of Life	8	3	-	-	-
Skill Development	8	3	-	-	-
Skills Maintenance	7	3	1	-	-
Interaction	6	4	1	-	-

Analysis of the results presented in Table 5.2 demonstrate that respondents rated TEACCH as having made a significant difference in all sub areas. This is particularly true in the areas of independence, skill development and maintenance and interaction. All eleven respondents also considered that TEACCH had made a significant difference to the quality of life experienced by the children.

Specific comments related to the extent that the children had improved their participation in local community life (reported by four respondents), the extent to which pupils 'learning curves had surged' (two respondents), and the way in which the repetitive nature of TEACCH promote 'over-learning' and thus prevented the loss of previously acquired skills. One teacher reported:

'The world has become a less confusing and frustrating place for our pupils. They now know what to expect and consequently know what is going to happen next in their lives. This promotes predictability and security'.

Five respondents also stated that their own tolerance levels had improved following the implementation of TEACCH, promoting more 'control over their teaching schedules,

Using TEACCH at home

One respondent reported that she considered that there was 'very considerable' potential for the implementation of TEACCH at home, four others rated this potential as 'considerable' and six stated that there was 'some' potential for its integration between school and the child's home. Seven staff stated that this was particularly dependent upon securing the co-operation of parents and other carers and all but one respondent felt that this area needed further development, investment and attention. All staff noted the importance of home-based liaison but acknowledged that this was a very time consuming issue since most parents required 'considerable support and guidance' in the implementation of TEACCH methods.

The advantages and disadvantages of TEACCH

Positive advantages relating to TEACCH were noted as a reduction in behaviour problems (5 respondents), improvement in communication (4 respondents), the provision of structured routines (4 respondents) and its accessibility and adaptability to meet the needs of individual children (3 respondents). Comments were also provided about its simplicity and potential to assist in the design of behaviour management programmes (3 respondents)

Four respondents noted that they had witnessed the direct relationship between the success of TEACCH and the avoidance of admission of four children into long stay residential care because of previously 'uncontrollable behaviours'. The rationale provided for these assertions related to a reduction in behaviour problems (particularly self-injury) and the promotion of parent coping skills and strategies.

The main weaknesses of TEACCH were reported as being: time consuming (5 respondents), the failure of some parents to accept the advantages and benefits of TEACCH (4 respondents) and the lack of additional training and ongoing support for TEACCH at home (3 respondents). Four staff mentioned the need for the appointment of a TEACCH co-ordinator in each SLD school to monitor pupil progress. Five respondents also requested that more staff be delegated to work in TEACCH classrooms.

Problems associated with the implementation of TEACCH at home were reported as:

Perseverance and lack of consistency at night and weekends - 3 respondents

Conflict of interest with time provided for other siblings - 3 respondents

Interference with family life/routines - 3 respondents

Lack of experienced staff to support parents - 2 respondents

Non-parental participation in TEACCH workshops - 2 respondents

Gaps in the present service were reported to relate to the need to extend TEACCH to pre-school services¹⁸, to mainstream schools (and to ESN (M) schools) and a reported deficit of home based support workers. The need for closer liaison between school and residential/respite care services was also mentioned by three respondents.

Preparation and training for TEACCH

Six respondents stated that they had attended a preliminary day conference on TEACCH that were facilitated by the TEACCH Project Team. Six also reported that they had participated in a three day focused workshop and all eleven confirmed their participation in a five day TEACCH workshop event. All respondents reported that they considered the quality of their learning experiences at the workshops to have been 'very useful'.

Recommendations for improving the quality and effectiveness of TEACCH

Eight respondents reported that more attention should be given to improving the quality and effectiveness of information (and its dissemination) about TEACCH.

Six persons considered the current TEACCH service to be under-resourced and recommended that more training should be provided for professional staff and parents. The need for appropriately trained support teachers was mentioned by five respondents (with an emphasis being made of the need to maintain a 1:1 staff/pupil ratio).

Four respondents also emphasised the importance of maintaining close working relationships between teachers and professional support workers. Improved community awareness about TEACCH, the need for regular meetings between TEACCH teachers and clinical psychologists/speech and language therapists and the desirability of introducing (and maintaining) a policy to ensure that all TEACCH teachers are appropriately trained in TEACCH methodology, were also reported as essential issues to be addressed if TEACCH is to be effectively implemented.

In summary the majority of respondents engaged in the provision of TEACCH in the project area have found TEACCH to be an effective method for enhancing the skills and abilities amongst their pupils/clients (and to have significantly reduced the reported incidence of maladaptive behaviours). One teacher summed up her feelings about the impact of TEACCH as follows:-

'Two years ago I was ready to resign my teaching post as I was finding it increasingly difficult to cope with the challenges presented by one pupil. With support and encouragement provided by a member of the TEACCH team I commenced the implementation of TEACCH with this pupil. The change in her behaviour has been considerable. I began to see (for the first time) that it was possible to create a sense of order in her life and in the classroom. As a consequence my pupil has begun to enjoy learning and I have begun to enjoy my pupil!'

CHAPTER 6

THE CHILDREN'S STUDY THE CARERS PERSPECTIVE

Introduction

Questionnaires (see Appendix 1) were distributed to the 19 parents of the children included in the main study (it was not considered appropriate to include the parents of the one 'control' child since he was not in receipt of the home-based TEACCH service) in order to obtain information in respect of the scope of coverage and quality of TEACCH as perceived by their primary carers. Approximately two weeks following the postal distribution of the questionnaires families were visited by a member of the research team and personal interviews were conducted to augment the data returned in the questionnaire. Nineteen questionnaires were returned (representing a response rate of 100%). The results arising from the parental interviews are presented in this chapter.

Information and parental involvement with TEACCH

All parents explained that they were aware of the TEACCH method and that their children were currently using TEACCH at school. Fourteen of the parents explained that they had been introduced to TEACCH following attendance at a workshop on the method (presented by the TEACCH Team)¹⁹, nine had also learnt about it from the Autism charity PAPA and nine were advised of the desirability of the approach from school teachers and professionals (e.g. Speech and Language Therapists. Sixteen (84%) parents were informed about TEACCH by their children's school teachers; the remaining three parents stated that they were introduced to TEACCH by health care therapists.

Only nine of the nineteen respondents considered that parents (in general) know who to contact to find out more about TEACCH, whilst 40% believed that professionals were aware of the availability of the method. Four parents considered that the distribution and availability of information about TEACCH was 'very effective', five 'considerably effective' and two 'effective'. However, seven expressed their concern that information systems were ineffective.

Initial expectations about TEACCH

Nine respondents stated that they had little or no expectations about TEACCH, five expressed positive optimism regarding its effectiveness for improving the quality of life experienced by their children and one person stated that the system would be rigid and too structured for implementation in the home setting.

Parents were asked to rate whether their initial expectations had changed following experience of TEACCH. Sixteen parents responded positively to this question stating that they now:

- regarding the method to very effective (11 respondents)
- applying the method with more confidence (3 respondents)
- felt able to adapt the method to meet individual needs (3 respondents)
- understood more about the method (3 respondents)
- their child's independence had been enhanced (2 respondents)
- felt less frustrated about their child's progress (1 respondent)
- 'had something to rely on as a back-up' (1 respondent)

However, one parent felt that the method 'was not as miraculous as they had hoped whilst one other respondent found the method 'impossible' to apply at home. Three respondents stated that their initial expectations had not changed.

The effectiveness of TEACCH

Parents were asked to rate their overall perceptions of the effectiveness of TEACCH. Eleven parents rated it as 'very effective', six as 'considerably effective' and two as 'effective'. More specifically parents rated its effectiveness against a number of criteria relating to improving self-help skills, social skills, reduction of problem behaviours, reduction of obsessional behaviours, enhancement of co-ordination skills, improvement of mobility, enhancement of communication skills and improved concentration. The results are presented in **Table 6.1: Parental perceptions of the effectiveness of TEACCH:**

n=19	Very Effective	Consid'ibly Effective	Effective	Not Effective	Don't Know
Self-Help Skills	10	6	3	-	-
Social Skills	5	5	4	5	-
Problem Behaviour	6	8	2	3	-
Obsess'al Behaviour	1	5	4	7	2
Coordin-ation	5	3	1	8	2
Mobility	5	2	2	9	1
Communi-cation	12	4	3	-	-
Concent-ration	8	3	4	3	1

Examination of the results included in Table 6.1 are favourable and suggest that respondents rate the effectiveness of TEACCH as considerable in most sub-areas. Closer examination reveals that this is particularly true for self help skill development, with parents providing evidence of improvement in areas such as dressing, independence, toileting and feeding. Three parents also stated that improvements in these area reduced the need to engage in constant surveillance of everyday activities.

Considerable improvements were also noted in social skill development. Six parents commented on the children's willingness to engage in meaningful play activities with other children thus reducing shyness and isolation. Other significant changes were noted in the reduction of problem behaviours: 8 respondents noted that tantrums had reduced in incidence and intensity, four commented on the easing of routines such as shopping and bedtimes whilst two others reported reductions in faecal smearing and swearing.

Less successful outcomes were reported for the incidence of obsession/compulsive behaviours with only six parents commenting on their reduced incidence. Five respondents stated that whilst some inappropriate behavioural routines had reduced, they had been substituted by new emergent obsessions.

The range of co-ordination skills was improved in nine cases (out of nineteen) with positive reports of reduction in 'clumsiness' in four cases. Mobility skills were improved for seven children although this result should be considered with caution since in nine other cases no

Improvements were also reported in concentration with four children being described as now watching television and two others reading books. However, it was in the area of communication that the greatest improvements were noted with all nineteen children being identified as having made effective gains in all aspects of communication (in fact four parents reported that their child had made 'dramatic improvements' in this area).

Parents also reported improvements in their son or daughter's progress in the areas of independence, quality of life, development of new skills, maintenance of existing skills and abilities and interaction skills. These results are reported in Table 6.2:

Table 6.2: Parental perceptions of improvement in skills and quality of life:

n=19	Great Difference	Some Difference	Little Difference	No Difference	Don't Know
Independence	8	11	1	-	-
Quality of Life	11	7	1	-	-
Skill Dev'tment	6	9	2	2	-
Skills Maintenance	8	6	-	5	-
Inter-action	7	7	1	4	-

Analysis of the results presented in Table 6.2 demonstrate that once again parents rated TEACCH to have made a significant difference in all sub areas. This is particularly true in the areas of independence, skill development and maintenance and interaction. Fourteen out of the nineteen parents (74%) also considered that TEACCH had made a significant difference to the quality of life experienced by their children.

More specifically parents reported that their children were more contented (6 respondents), were able to follow simple instructions (7 respondents) and were now tolerating visitors to the home (5 respondents). However six respondents also stated that they were unable to attribute all of these successes to TEACCH and considered that the natural process of maturation may have been significant.

In summary, 11 respondents considered that TEACCH had been very useful, 3 that is had been considerably useful, 2 useful and one stated that they had not formed a specific opinion in respect of its effectiveness. These sentiments are summed up in the following quotes provided by parents:-

'If we had not had TEACCH there would have been serious problems in the family - we would have given up. She is a different child now'.

and

'TEACCH puts our minds at rest that our son is not just going to school to be minded but is involved in a structured programme with positive results.'

Using TEACCH at home

Fifteen of the nineteen parents stated that they were regularly using TEACCH at home. Of these four had been using it for two to three years, 6 had been using it for one year whilst nine had used it for approximately nine months. Three of the four parents who had elected not to use TEACCH at home (despite having been offered support from the TEACCH Team) stated they considered the programme to have been too structured and rigid for implementation within the context of family life.

However, despite some reservations all parents reported that they believed that TEACCH methods could be transferred to the home (with 18 stating that this was achievable to a 'considerable or great extent'). In acknowledgement of the considerable time and commitment involved in implementing TEACCH at home, six parents stated that other family commitments often conflicted with implementation of TEACCH, two commented on the excessive time required for the preparation of teaching materials whilst one person reminded the researcher that its success depended upon the involvement and commitment of the whole family circle.

Positive advantages relating to the full implementation of TEACCH were noted as a reduction in behaviour problems (6 respondents), improvement in communication (5 respondents), happier children (5 respondents), the provision of predictable routines (4 respondents) and the reduction of frustration experienced by children (3 respondents).

The main weaknesses of TEACCH were reported as being: time consuming (5 respondents), intrusive to the normal pattern of domestic life (4 respondents) and the lack of additional training and ongoing support for TEACCH at home (3 respondents). Eight parents also reported that TEACCH militated against parental involvement with other children in the family (a source of reported tension in the family) and four others commented on the lack of time for other additional commitments at home. The 'excessive' time required for initial training was also mentioned by three respondents.

Preparation and training for TEACCH

Fourteen respondents stated that their children were effectively prepared for the implementation of TEACCH within their classes at school. One parent was aware that a formal assessment had taken place to assess the desirability of using TEACCH at school whilst five parents reported that they were unaware that their children had received any preparation for the programme.

Eight parents had received home visits from members of the TEACCH team prior to the implementation of the project and respondents rated these visits highly. Four others had been invited to attend a parent workshop to introduce them to TEACCH principles prior to agreeing to participate in the scheme. Two respondents reported that they had not been adequately prepared.

Following the implementation of TEACCH with their children, fourteen respondents reported that they had attended a parent workshop on TEACCH. Of these five reported that this had been 'very useful', six 'useful' and one 'somewhat useful' (two others stated that they had not formed an opinion in respect of its usefulness).

All respondents reported that they had received contact from members of the TEACCH project team and 14 considered this to have been 'very effective' (with another four rating the liaison service as being 'considerably effective' and two stating that it was 'somewhat effective').

Recommendations for improving the quality and effectiveness of TEACCH

40% of parents believed that more attention should be given to improving the quality and effectiveness of information (and its dissemination) about TEACCH. Six parents considered the current TEACCH service to be under-resourced and eight persons stated that they would like to see more resources directed to the provision of home based teaching liaison to assist, for example, with the design of TEACCH environments, materials and schedules and in the setting of homework. The desirability of providing more regular home visits was urged by ten respondents.

Four respondents also requested that TEACCH be implemented in all respite care establishments where their children attend (including its provision during the operation of Summer play schemes) and six believed that more attention should be given publicising the TEACCH service.

More parent workshops were recommended (by seven respondents) and the training of members of professional support staff (such as General Practitioners) was mentioned by seven parents.

Specific requests for improving the TEACCH service related to the provision of training for all members of the family, the development of video training materials on TEACCH methods and more training for domiciliary support staff.

In summary the majority of parents have found TEACCH to be an effective method for enhancing the quality of life for their children and family. Needless to say some parents remain apprehensive about the desirability of implementing TEACCH at home²⁰.

The following quote has been selected to illustrate the majority view of parents regarding its effectiveness:-

'At first I felt why use a system to communicate with my child when he can already say certain words and understand when he wants to? But when I actually started to use TEACCH I saw how it made much more sense to him through the use of picture cards and symbols, rather than relying on asking him to do things. I now feel much more confident to use it - it works for us'.

CHAPTER 7

THE CHILDREN and ADULT STUDY THE EVALUATION of CARER and STAFF TRAINING ACTIVITIES

Introduction

One of the main objectives of the TEACCH project is to disseminate information about TEACCH and to transfer knowledge and skills to enable the method to be effectively implemented in a range of settings outwith the formal TEACCH classroom. The Project Team has been engaged in the provision of an extensive range of workshops and related training events. This chapter considers the results arising from the evaluation of these activities.

Formal evaluations arising from the TEACCH workshops

A total of nineteen workshops (representing 29 training days) were sponsored and delivered by members of the TEACCH Project Team between May 1994 and October 1995. These ranged from one day introductory courses on TEACCH to two and three day skills based workshops.

Each workshop was systematically evaluated by the project team clinical psychologist. Questionnaires were circulated to each participants to assist them in this exercise. Workshops were provided to the following categories of participant:

- Teacher workshops - 5²¹ (159 participants)
- Parents - 4 (56 participants)
- Paediatric Support/Assessment Units - 2 (69 participants)
- Residential/Respite Care Services (children) - 2 (25 participants)
- Professional workshop (all ages) - 2 (44 participants)
- Adult behavioural services - 2 (22 participants)
- Adult residential services - 1 (14 participants)
- Adult day care services - 2 (80 participants)

Participants were asked to rate the quality of their learning experience. A total of 469 persons participated in the workshops and of these 380 (81%) reported that they had found the quality of the workshops to have been 'very worthwhile', a further 84 (18%) stated that the workshops had been 'satisfactory', whilst only five (1%) respondents reported that they had been disappointed with the effectiveness of the training event. All participants (100%) reported that they would 'recommend' the workshops to their colleagues.

Documentary evidence relating to the effectiveness of training events

In addition, twenty items of correspondence were received by the TEACCH project team during the evaluation period. Without exception these were most complimentary. The following extracts have been included to provide a representative sample of responses:

'I have recently visited North Carolina and I found all of the staff at TEACCH to be very helpful and accommodating. I was impressed with the extent of the facilities there. I was equally impressed by the TEACCH facilities operating at your school...' (professional correspondent - dated January 1995).

'We both feel that you did a tremendous job with our son and the quality of the commitment and enthusiasm shown by you was not something that, we as a family take for granted....' (parents - dated February 1994).

'On behalf of the participants at the two day TEACCH course I would like to extend my most sincere thanks and congratulations to you on the excellent and most informative presentation - it was first class!'....(health professionals dated April 1994).

'We appreciated the richness of all that you had to share with us at our last in-service afternoon in May'....(Consultant Pediatrician dated August 1994).

'I am writing to thank you for the excellent hard work provided in support of the workshop. I think that one of the comments from the evaluation forms sums up the course very nicely, 'points covered very thoroughly and in an interesting way....the course was excellent'....(Education and Library Board Officer dated March 1995).

'Feedback from staff has been very complimentary. They all agreed that the workshop was very informative and that the presentation was excellent'.....(voluntary sector nursery manager dated April 1995).

'We are writing to let you know that we found the course very valuable. The content was excellent and the speakers presented the complex information in an accessible way. It was greatly appreciated'....(health service professional dated December 1994).

Summary

Analysis of formal evaluation reports of the nineteen training events provided by the TEACCH project team demonstrates that participants rated the workshops as being 'very effective'. The evaluation reports are further supported by documentary evidence provided by a number of workshop participants.

CHAPTER 8

THE ADULT STUDY

Introduction

Questionnaires (see Appendix 1) were distributed to the parents of the 7 adult members of the sample included in the study with the aim of obtaining information in respect of the scope of coverage and quality of TEACCH as perceived by their primary carers. All seven adults were using TEACCH at a local Social Service adult day centre. As with the children's study the families were visited by a member of the research team and personal interviews were conducted to augment the data returned in the postal questionnaire. Seven questionnaires were returned (representing a response rate of 100%). The results arising from the parent interviews/questionnaires are presented in this chapter. In addition the views of staff members involved in the provision, management and monitoring of the TEACCH programme for the adult group are recorded²².

This chapter also considers the nature of the adult TEACCH teaching/learning environment and presents the results of the pre-and post baseline performance results arising from the 'Adolescent and Adult Psychoeducational Profile (AAPEP)' tests²³. Other data arising from analysis of the adult groups' personal files and trainer reports is also reported.

The TEACCH pilot project

TEACCH methods had been implemented with a selected group of adults with Autism (at one day care centre) since early 1993. The TEACCH pilot project was implemented at the day care centre in October 1994. Subjects were selected from a group of persons who had a history of 'severely challenging behaviour'. Of the seven clients who were finally selected, four were in receipt of intensive 1: 1 staff support (as part of previously negotiated care management packages).

Five of the seven subjects were male and two were female with an average age of 25.14 years (within a range of 22 - 31 years). All subjects displayed aberrant behaviour of varying degrees of severity²⁴. More specifically they were regarded by their support staff as being either 'destructive to themselves, to others or to property'.

Three of the group were diagnosed as having had a severe learning disability, two had a moderate learning disability and the remaining two respondents had a borderline learning disability (one of whom also had an associated schizo-affective disorder). Two other members of the group had a secondary diagnosis of mental illness - one with manic-depressive psychosis and one with a 'non-specific' psychotic illness. One member of the group also had a severe hearing/speech impairment.

All subjects had received multi-disciplinary assessments and evidence of personal 'care plans' was included in their personal files. Systematic 'instructor' reports were provided for each person. Psychometric assessment results were also recorded by Clinical Psychologists for all subjects. The psychometric results provided evidence of mental age at the time of testing but, in the absence of comparative psychometric assessments, it was not possible to infer differences test results over time.²⁵

Pre and post pilot test results were presented for each person in respect of their adaptive skills (recorded on the S.T.A.R. Profile - The Social Training Achievement Record, William's, C. 1982), their psychoeducational performance (the AAPEP) and behavioural change/adaptation.

Client performance and outcomes

1- Comparison of pre and post Adolescent and Adult Psychoeducational Profile (AAPEP) scores

The AAPEP tests clients against six main areas of psychoeducational functioning: vocational skills, Independent functioning, leisure skills, vocational behaviour, functional communications and interpersonal behaviour. Pre and post test scores were provided for each of the seven subjects and were rated in respect of the extent to which test items were 'passed', considered to be 'emerging' or 'failed'. Respondents were tested at the commencement of their TEACCH programme (the pre-test result) and again approximately one year later (the post-test result).

In respect of vocational skills only two of the seven subjects failed to demonstrate improvement during the 12 month duration of the project which is an interesting result considering the actual level of intellectual impairment that was displayed by the subject group. Three others improved their performance by converting ten 'fail' scores to ten 'emerging' scores, whilst two persons converted five 'emerging' scores to pass scores.

In the independent functioning area six respondents converted eleven 'fail' scores to nine 'emerging' and two 'pass' scores whilst one respondent showed 'no change' in this area. In addition three subjects converted three 'emerging' scores to pass scores.

Performance in the acquisition of leisure skills was also impressive with five persons converting twelve 'fail' scores to 'emerging' scores (three persons also converted four 'emerging' scores to 'passes'). One person demonstrated 'no change' in this area.

All seven respondents improved their performance in respect of their vocational behaviour and converted a total of twenty six 'fails' to 'emerging' scores. Three subjects also converted eleven 'emerging' scores to 'passes'.

Performance in the functional communication sub-area demonstrated that four respondents improved their scores by upgrading eleven 'fails' to 'emerging' scores whilst six persons converted a total of twelve 'emerging' scores to 'passes'.

In the area relating to interpersonal behaviour six of the seven subjects demonstrated improvements in their behaviour with five persons converting a total of fifteen 'fails' to eleven 'emerging' and four 'pass' scores. In addition five persons increased their scores by upgrading twelve 'emerging' scores to 'passes'. One person failed to demonstrate improvement in this area.

In summary the results arising from the comparison of pre and post AAPEP scores suggest that the majority subjects demonstrated considerable improvements across the range of test areas. The overall resultant 'gains' are presented for each of the seven respondents in Table 8.1:

Table 8.1: % Increase in AAPEP scores between pre and post test results.

n=7	Client 1	Client 2	Client 3	Client 4	Client 5	Client 6	Client 7
%increase 'Pass' scores	+15%	+11%	+10%	+14%	+17%	+19%	+6%
%increase 'Emerging' scores	-4%	-5%	+27%	+18%	+4%	-14%	+20%

Analysis of the results presented in Table 8.1 demonstrates that considerable 'gains' were achieved by all subjects in both 'emerging' and 'pass' score categories²⁷.

2- Comparison of pre and post Adaptive Skills (S.T.A.R. profile) results.

The seven subjects were also assessed in respect of their acquisition of adaptive skills using the S.T.A.R. profile. Each persons was tested at the beginning and at the end of the project (within a twelve month interval). All respondents demonstrated improvements in adaptive skills. The results are presented in Table 8.2:-

Table 8.2: % Increase in S.T.A.R. profile scores between pre and post test results.

n=7	Client 1	Client 2	Client 3	Client 4	Client 5	Client 6	Client 7
%increase in score	+2%	+7%	+4%	+17%	+2%	+12%	+1%

3- Comparison of pre-and-post TEACCH behavioural results.

Each subject was assessed at the commencement of the TEACCH programme in respect of the presentation and incidence of inappropriate behaviours using the 'Checklist of Challenging Behaviours' (Harris, P. et. al., 1994). The results are presented for each respondent:

Client One

Client one presented with four specific difficulties: aggression, self-abuse, mood-swings and psychomotor agitation. At the post-pilot phase of the study (twelve months after the implementation of TEACCH) the incidence of aggression, self-abuse and psycho-motor agitation had reduced by 95% and a decrease of 75% was witnessed in 'mood-swings'.

Client Two

The second subject presented with three specific difficulties: aggression, self-abuse and hyperkinesis. At the post-pilot phase of the study the incidence of hyperkinetic behaviour had reduced by 80%, self-abuse by 90 % and aggressive behaviour by 95%.

Client Three

The third client presented with five specific difficulties: aggression, self-abuse, stereotypy, compulsive behaviour and psychomotor agitation. At the post-pilot phase of the study there was no change in the incidence of psychomotor agitation but a reduction in the incidence of all other behaviours was noted: self-abuse by 85 %; aggressive behaviour by 20%; stereotypy by 45% and compulsive behaviour by 39%.

Client Four

Client number four presented with three specific difficulties: stereotypy, idiosyncrasy and compulsive behaviour. At the post-pilot phase of the study the incidence of stereotypic behaviours had reduced by 48%, idiosyncrasy by 60 % and compulsive behaviours by 50%.

Client Five

The fifth subject presented with one specific difficulty - compulsive behaviour. No specific results were recorded for this person at the end of the post-pilot phase. It was, however reported that the 'problem behaviours were in remission'.

Client Six

Client number six presented with five specific difficulties: aggression, self-stimulatory behaviour, stereotypy, day time enuresis and masturbation in public. At the post-pilot phase of the study the incidence of self-stimulatory and stereotypic behaviours had reduced by 90%. Both the aggressive and enuretic difficulties were reported to have been 'in remission' whilst there was no change noted in respect of the incidence of masturbation.

Client Seven

The final subject presented with eight specific difficulties: mood swings, tearful outbursts, self-abuse, object abuse, hyperkinesis, attention seeking, elation and flight of ideas. At the post-pilot phase of the study the incidence of object abuse, elation, flight of ideas and hyperkinesis were reported to have been 'in remission' whilst there was a specific reduction in the incidence of the remainder: Mood swings and tearful outbursts by 90%; self-abuse by 95% and attention seeking behaviours by 80%.

In conclusion it appears that there had been a significant decrease in the incidence of a range of reported inappropriate behaviours for all seven clients.

The TEACCH environment - evaluating adherence to TEACCH principles

The TEACCH Co-ordinator completed a questionnaire designed to identify the extent to which the principle features of the TEACCH model had been implemented (see Appendix Two). The results were validated following an observational visit to the day service. The results arising from this exercise are presented in this section.

The TEACCH environment was established in 1994 in the form of a 'mobile' instruction unit. The TEACCH Co-ordinator was 'TEACCH trained'. Each of the seven subjects participating in the study was described as being either 'autistic' or having a 'related communication disorder'. The curriculum was designed to adhere to the 'TEACCH model'.

Physical Structure/Classroom Schedules and Work Systems

All twenty items included in the first two sub-scales were achieved and were in place by April 1995. The TEACCH environment was finally commissioned in April 1995 following the extension of premises at the local day service.

Individualised Communication Systems.

All seven goals were achieved by January 1995. The subjects were reported to have had access to a 'one to one' worker, thus enabling the implementation of effective communication systems between support workers and clients.

Personal Goal Plans

The eleven items were achieved by November 1994. Personal planning meetings were reported to have been held at three monthly intervals and were monitored at daily and weekly intervals.

Structured Approach to Behaviour Management.

All ten items were noted to have been consistently achieved since November 1994.

Plans for Parent Involvement.

Opportunities were not provided for parents to work with their sons/daughters at the day care service. 'TEACCH' parent groups had been held at the Day Care Service (although not on a regular basis). All parents however participated in annual reviews of their sons/daughters progress. The seven remaining sub-goals in this section had been achieved by October 1994.

Maintenance of the Model

All seven items were achieved in September 1994. Regular support and consultancy was provided by two members of the TEACCH project team - a Consultant Clinical Psychologist and a Senior Day Care Worker (who was also a qualified Behavioural Scientist) and responsibilities were clearly defined.

The parents perspective.

Questionnaires (see Appendix 1) were distributed to the 7 parents of the adults included in the study in order to obtain information in respect of the scope of coverage and quality of TEACCH as perceived by their primary carers. Personal interviews were also conducted with each family by a member of the research team. The results arising from the parental interviews are presented in this section of the chapter.

Information and parental involvement with TEACCH

All parents explained that they were aware of the TEACCH method and that their sons/daughters were currently using TEACCH at the day service. Four of the parents explained that they had been introduced to TEACCH following attendance at information sessions at the day service, one had attended a formal workshop on the method and one other respondent had learnt about the method from the Autism charity PAPA. The final respondent stated that TEACCH had been implemented without her knowledge of the programme²⁸. Four of the seven parents considered that other professionals were aware of whom to contact to access TEACCH.

One parent considered that the distribution and availability of information about TEACCH was 'very effective', two regarded it to have been 'considerably effective' and four 'effective'.

Initial expectations about TEACCH

Four respondents stated that they had little or no expectations about TEACCH prior to the implementation of the method, two expressed positive optimism regarding its effectiveness for improving the quality of life experienced by their son/daughter and one other parent stated that she had hoped that it 'would work miracles'.

When asked to rate whether their initial expectations had changed following experience of TEACCH, three respondents reported that they had found it to be a most impressive method. One other parent stated 'it provides a new lease of life for my daughter and for the first time in 31 years she has a real life' and one other parent noted that 'my son has now helped us to modify our lives with the result that we are much more relaxed now and now live together as a 'real family'.

The effectiveness of TEACCH

Parents were asked to rate their overall perceptions of the effectiveness of TEACCH. One parent rated it as 'very effective', two as 'considerably effective', two others as 'effective' and one did not express an opinion. Parents also rated its effectiveness against a number of criteria relating to improving self-help skills, social skills, reduction of problem behaviours, reduction of obsessional behaviours, enhancement of co-ordination skills, improvement of mobility, enhancement of communication skills and improved concentration. The results are presented in Table 8.3:

Table 8.3: Parental perceptions of the effectiveness of TEACCH:

n=7	V Effective	Consid'bly Effective	Effective	Not Effective	Don't Know
Self-Help Skills	2	1	3	-	1
Social Skills	1	1	3	1	1
Problem Behaviour	1	1	2	2	1
Obsess'al Behaviour	1	1	4	-	1
Coordin-ation	3	2	1	-	1
Mobility	2	1	2	-	2
Communi-cation	2	-	2	1	2
Concent-ration	2	1	1	1	2

Examination of the results included in Table 8.3 suggests that respondents rated the effectiveness of TEACCH to have been 'considerable' in most sub-areas. Four parents explained that the programmes had improved their son/daughter's confidence and mentioned that they were now engaging in household tasks such as cooking, housework and making their beds. Two others reported that their sons/daughters had also improved their concentration and were now 'watching television with the family' and 'involving themselves in hobbies such as knitting and reading'.

Whilst mobility skills improved for some subjects, two parents mentioned that no difficulties were reported with mobility prior to the implementation of TEACCH.

Parents also reported improvements in their son or daughter's progress in the areas of independence, quality of life, development of new skills, maintenance of existing skills and abilities and interaction skills. These results are reported in Table 8.4:

Table 8.4: Parental perceptions of improvement in skills and quality of life.

n=7	Great Difference	Some Difference	Little Difference	No Difference	Don't Know
Independe-nce	1	1	3	2	-
Quality of Life	1	3	1	2	-
Skill Dev'ment	1	3	1	2	-
Skills Mainte-nance	4	-	1	2	-
Inter-action	3	2	1	1	-

Analysis of the results presented in Table 8.4 demonstrates that in four of the seven cases parents considered that TEACCH had made an actual difference in all sub- areas of their son/daughter's lives. Four of the parents also considered that TEACCH had made a significant difference to the quality of life experienced by their sons and daughters.

In summary, one of the seven respondents reported that TEACCH had been 'very useful', 2 stated that it had been 'considerably useful', 2 'useful' and one stated that they had not formed a specific opinion in respect of its effectiveness. The following quotes were provided by parents:-

'TEACCH would have been far more effective if it had been around years ago'.

'TEACCH has been a great help to us all. We are now more relaxed and we do not feel that we are walking on eggshells any more'.

Using TEACCH at home

Five of the seven parents stated that they were regularly using TEACCH at home (although all were actually provided with offers of home support from the TEACCH Team). Of these four had been using it for between three and four months and two for almost a year. Two of the parents had elected not to use TEACCH at home and stated that they considered the method to have been too structured for use within a family setting. One parent also reported that they required more practical advice and support was required to implement the programme at home.

However, all parents reported that given appropriate support, TEACCH methods could be transferred to the home (with two adding the stipulation that additional 'back up' and time would be required to achieve this aim).

Positive aspects of TEACCH were noted as a reduction in behaviour problems (3 respondents), improvement in communication (3 respondents), more contented persons (2 respondents), the provision of predictable routines/structure (2 respondents) and an increase in self-help skill development (1 respondent).

The main weaknesses of TEACCH were reported as being: 'time consuming' (2 respondents), 'over-structured' (2 respondents) and the need for 'one to one support for the programme' (1 respondent). Two parents also reported that TEACCH would have been more beneficial for their son/daughter 'if it had been implemented at an earlier age in their lives'.

Preparation and training for TEACCH

Three respondents stated that their sons/daughters were prepared for the implementation of TEACCH within their day centre by the TEACCH Co-ordinator. Three parents reported that they were unaware that their sons/daughters had received any preparation for the programme.

Following the implementation of TEACCH with their sons/daughters, two respondents reported that they had attended a parent workshop on TEACCH. Of these one reported that this had been 'considerably useful' and the other did not express an opinion in respect of its effectiveness. The other five parents stated that they had elected not to become involved in any form of formal training event for TEACCH.

Six respondents reported that they had received support/advice from the TEACCH Co-ordinator. Four of the parents considered this to have been 'very effective', one 'considerably effective' and the remaining respondent was indecisive.

Recommendations for improving the quality and effectiveness of TEACCH

Five parents believed that the quality of information provided about TEACCH could be improved, four requested additional resources to facilitate home-day service liaison, three respondents reported that they considered the TEACCH service to have been under-resourced and two others mentioned the need for the provision of more practical advice on how to implement the method at home (one respondent also noted the need for the provision of practical support at home during weekends).

Finally three respondents reported that they believed that TEACCH should be implemented as early on in the child's life as possible to maximise its potential for success.

In summary the majority of parents acknowledged the potential that the application of TEACCH methods had for the enhancement of skill development and for the reduction of inappropriate behaviours. Several parents, however, noted that the method should have been implemented when their son/daughter was younger. More emphasis on home liaison was recorded as an area for further development. As with the childrens' parents (see Chapter 6), some of the adult parents remained apprehensive about the desirability of implementing TEACCH at home due the structure/restrictions it imposed on family life and the time required for its implementation.

Professional views

Whilst the opinions of a range of professional support staff have been reported in Chapter 4 of the present study specific comments were provided by staff directly involved in the delivery, management and monitoring of TEACCH with the adult group. These are presented in this section.

Respondents included the TEACCH Co-ordinator for the adult service, a consultant clinical psychologist, a day service manager and a learning disability programme manager for the Health and Social Service Trust within in which the selected day service was located.

The respondents reported that their clients and fellow professionals knew who to contact to seek information and access to the TEACCH service. They noted that access was most commonly facilitated through day care workers, community learning disability nurses and the consultant clinical psychologist (all three respondents were advised about TEACCH by their local clinical psychologist). Overall they rated the distribution of information about TEACCH to have been 'considerably effective'.

All three reported that whilst they held 'positive' expectations about TEACCH prior to its inception, they now 'fully understood the advantages of the method and witnessed its potential for use with people with behavioural needs'. As one respondent noted:-

'Since implementation of TEACCH I have realised that not only did TEACCH provide the answer to problems specific to people with Autism, but that it also had wider application for all clients needing structure in their lives. TEACCH has also proved to have been effective in addressing severe behaviour problems in non-autistic people e.g. people with manic-depressive psychosis and hyperactivity'.

TEACCH was rated as being either 'effective' or 'very effective' by all respondents in the following areas: improving self-help skills, reducing inappropriate behaviours (including obsessional-compulsive problems), improving fine and gross motor skills and in the enhancement of communication skills and concentration. Quality of life, skills development, maintenance of existing skills and interaction skills were also noted to have been considerably improved. The importance of structure was emphasised by the three respondents:

'Structure has been extremely effective in focusing the attention required to negotiate quite complex skills and has provided continuity and meaning to everyday life....'. The overall impact of TEACCH was rated as being 'very good' by the three respondents.

There was less enthusiasm for the integration of TEACCH methods between the day service and the subjects' home and all respondents reported that this had been 'somewhat' successful. One respondent stated:

'The greatest hindrance is not so much about the availability of staff to support TEACCH at home but willingness of parents to use the method at home. While for some families home programmes may not be practical, nevertheless, TEACCH programmes would be successful many times over if it was implemented in all home environments'.

The three respondents also noted that they considered that TEACCH had been directly influential in assisting three people to remain living in the community (and by so doing avoiding long-stay hospitalisation). As one respondent noted:

'For one client both community and respite care services were at the point where they could no longer cope with one individual. The introduction of TEACCH has enabled all involved to continue to work with the individual and the behaviour is now more manageable for longer periods of time'.

The main strengths of TEACCH were seen to be its 'structured approach', its 'adaptability' and 'effectiveness in reducing the incidence and intensity of inappropriate behaviours'. Conversely one respondent stated that the 'main weakness of TEACCH' to have been 'the cost-intensive' nature of its operation'. In all cases the three respondents reported that for some clients more appropriate premises were required for its implementation supported by additional staff resources.

In respect of training for TEACCH, two respondents reported that they had attended a one day workshop, one a three day workshop and another a five day workshop. All reported the workshops to have been 'very useful'. Two respondents used TEACCH regularly each week (one for 36 hours with nine clients and the other for five hours for ten clients). All three respondents reported that they had worked with people with Autism for more than one year and stated that they were 'very aware' of Autism.

In conclusion the three respondents considered that TEACCH had been significantly effective with the adult group. The following quote provided by one of the respondents is presented to summarise this cohorts' feelings about TEACCH:

'We all need to increasingly focus on TEACCH in terms of improving knowledge, improving skills and is developing services in line with TEACCH principles. Considerable effort from a number of staff has placed TEACCH on the 'agenda'. The challenge now is to develop it appropriately. There is an interest from providers and purchasers. We must not waste this opportunity'.

Using TEACCH at home - reports from the TEACCH team

Analysis of client files and day service records provided evidence of the extent to which home-work liaison was facilitated. TEACCH was reported to have been introduced at the day service approximately twelve months prior to the evaluation exercise. The TEACCH team reported that home liaison occurred at monthly intervals for all seven families. The extent to which the TEACCH team engaged in systematic evaluation or 'tracking' of pupil progress was variable and ranged from telephone contact and the provision of advice to

direct supervision of home-based programmes. All seven families were reported to receive regular home visits from community learning disability nurses and the consultant clinical psychologist.

Summary

This chapter has considered the results arising from the adult study. Pre and post test results have demonstrated significant gains in all areas of adaptive skill development and psychoeducational development; TEACCH has also proved to have been effective in the reduction or remission of inappropriate behaviours.

In addition the views of parents and professional support staff working with the TEACCH Project team have been reported; the characteristics of the adult TEACCH environment have also been considered.

CHAPTER 9

Discussion

Introduction

The purpose of the TEACCH (Treatment and Education of Autistic and related Communication handicapped CHildren) Evaluation Study was described in Chapter One as having been to evaluate the effectiveness of the TEACCH project for people with Autism in the South Eastern Education and Library Board Area of Northern Ireland. The sponsors of the study (co-ordinated by the Autism charity PAPA) were specifically interested in validating the effectiveness of the method amongst children and adults with a range of learning disabilities within the context of Northern Ireland's educational, health and social service provision. The results arising from the present study (and their subsequent discussion) relate to data collected at the end of a twelve month period ending November 1995.

Key issues for consideration.

It was acknowledged in Chapter One that since the TEACCH programme includes complex components, several lines of evaluation data must be compiled and applied to the research study. In the present study these included the use of informal evidence, objective measurement of outcomes in social, cognitive, behavioural and self-help skill domains, parental/professional perceptions of treatment outcome effectiveness and changes in parent/staff skills. In addition the perceived effectiveness of the provision of home based intervention services, support and consultation to classrooms and other professional services, behaviour management procedures and home based intervention services and teaching, professional training and consultation services were considered as areas for enquiry.

The present study therefore aims to provide an overview of the range and characteristics of the TEACCH method in one area of Northern Ireland and to assess its effectiveness and report the extent to which consumers and others are satisfied with the range services available.

The four, interrelated parts of the study examined the views of parents (of both children and adults), TEACCH project staff and professionals, managers and planners who were involved in the implementation or sponsorship of TEACCH.

The context of public service provision

One feature of the changing context of delivery of all government sponsored educational and treatment strategies for people with learning disabilities has been the demand for the provision of informed data to provide evidence regarding the effectiveness of planned interventions. The following key issues are considered to require further research and analysis:

1. Information

The range and quality of information relating to the availability of services, access and eligibility varies across the Province and is a key determinant of the extent to which TEACCH services are available. This may result from the small number of professional staff who are trained and experienced in the use of TEACCH.

2. Sensitivity of Carers

TEACCH may be regarded as a highly emotive issue for carers, with some carers believing that the success of TEACCH is dependent upon their own personal efforts in the home. As has been found with other home based intervention programmes (such as the application of behaviour modification approaches) It may be that some parents are unable to invest the time required to successfully implement the method (alongside the other demands of caring for both a family and the specific needs of a family member with a disability) or it may be that parents who are particularly stressed might be the least likely to accept offers of help.

3. Demand

The extent to which present levels of service coverage meet the actual (or more universal needs) of people with Autism and their families is as yet unquantified. The present study was conducted in one Education and Library Board area that had sponsored the implementation of TEACCH. It is evident that demand for teaching, training or consultation on the implementation of TEACCH exceeds current supply.

4. Quality

Effective methods of measuring the quality of TEACCH provision for this client group are not well developed throughout Northern Ireland. The quality of existing services, including preparation for TEACCH and follow-up at home, school and work needs to be further studied and evaluated.

5. Financial Considerations

TEACCH has been described as a 'labour-intensive' method. The extent to which initial investment actually results in 'value for money' is therefore an area for further consideration. Preliminary findings arising from the present study suggest that the application of TEACCH methods result in a significant reduction in the incidence and severity of inappropriate behaviours amongst clients and enhance opportunities for skill development. As such the costs of potential avoidance of institutionalised care for clients must be balanced against the actual initial and maintenance costs associated with the provision of TEACCH to those people with Autism (or related communication disorder) who have been assessed as deriving potential benefit from the method.

The provision of information relating to TEACCH

The 1992 Charter for Patients and Clients (DHSS) emphasises the importance of providing information to recipients of health and social service care about the availability and quality of services (similar requirements are expected of educational providers). Data was collected from the parents (of both children and adult service users), project staff and professional support staff (and their managers) to inform the extent to which they considered the provision of information about TEACCH (and its subsequent dissemination) to have been effective.

In the first place all respondents (parents of both the children and adults, project staff and professionals) were asked to consider the extent to which they believed parents/carers knew who to contact to access TEACCH. Responses suggest that 47% of parents, 45% of project staff and 39% of professionals believe that parents knew who to contact. Approximately 85% of all professionals and project staff (compared to only 40% of parents) considered that other professionals knew who to contact to gain information about the method.

Fifty five per cent of all parents considered the effectiveness of the availability and distribution of information about TEACCH to have been at least 'effective' compared to 68% of professionals and all of the project staff. Conversely five professional staff (18%) and seven parents (35%) considered that information systems were ineffective, thus suggesting that there is a need for better information sharing between programme sponsors, carers, practitioners and others. A significant number of these may remain unaware of TEACCH or its availability in Northern Ireland²⁹.

Sixty five per cent of parents stated that their offspring were effectively prepared for the implementation of TEACCH at school; three of the seven parents of the adult members of the study held similar views. However, three of the adult parents reported that they were unaware that TEACCH was to be implemented with their son/daughter. Of the children's sample eight (40%) had received home visits prior to its implementation whilst four others had attended an information evening at their child's school. In total three parents stated that they had not been adequately prepared for the implementation of the method (it is also interesting to note that only seven out of the 28% professionals (25%) considered that carers had been adequately prepared for TEACCH).

Following the implementation of TEACCH only two of the adult parents stated that they had attended a parent workshop compared to fourteen of the twenty parents (despite the fact that invitations had been extended to all parents by the TEACCH project team to attend such events). Of the professional group twelve (43%) reported that they had not attended a TEACCH workshop (although a further eight stated that they had attended a one day conference).

Analysis of these results provides evidence to suggest that whilst efforts had been made to prepare clients/carers and professionals for the implementation of TEACCH, these fell short of the actual needs of these groups. Further attention should therefore be given to developing an information/implementation strategy for parents/carers and support staff.

Sensitivity to the needs of carers

Results obtained from the parent studies suggest that the majority of respondents regard TEACCH to have been an effective method for improving the quality of life for their sons/daughters. However, a significant number of parents were apprehensive about its application at home due to the time that is required to ensure its successful implementation.

It appears that the arrangement of appropriate home-liaison services depends on the extent to which the TEACCH staff have a personal knowledge of the clients' needs and on their ability to maintain regular and consistent contact with the clients and the families themselves. Three quarters of all parents stated that they were satisfied with the quality of home liaison provided by members of the TEACCH team but a significant number (40%) requested that additional resources should be made available to extend the home based service to provide more continuity and practical advice in respect of programme design and implementation.

Professional support staff (such as Community Mental Handicap Nurses) are also considered to be important in assisting in the transfer of knowledge about TEACCH between school/work and the home setting. Of the twenty eight respondents included in the 'professional sample', four reported that they felt home liaison services had been well developed, whilst a further sixteen (58%) felt that this had been achieved 'to some extent' thus suggesting that further improvements were required in this area (including the deployment of additional peripatetic professional staff to fulfil the home based intervention responsibilities associated with TEACCH).

It is recommended that attention should be given to securing the further involvement of community based health and social service staff in assisting home based implementation of TEACCH. The development of a 'tri-partite' arrangement between TEACCH personnel, parents/carers and professionals is considered to be a cost-effective method that warrants further investigation considering that some 75% of all clients receiving TEACCH were already in contact with domiciliary professional support staff.

The importance of follow up with families to determine the effectiveness and quality of TEACCH is another area for discussion. Whilst no direct questions were included in the interview schedule to elicit information in regard to this issue, respondents did suggest that they were not adequately appraised of their son/daughters' progress. It is recommended that TEACCH practitioners should provide parents with monthly written progress reports to encourage parents in the implementation of the method at home.

Parents also reported a preference for the provision of evening and week-end visits from TEACCH/professional staff to assist them in maintaining the programme. The need for practical advice on how to structure programmes and to accommodate the rigorous demands that the method places on family life were also reported.

Despite the difficulties that some parents and professionals felt about the implementation of TEACCH at home, all but one of the twenty six parents of both the children and adult groups reported, that given additional preparation, support and regular home-based liaison, TEACCH could have potential for implementation in the home setting and thereby fulfil its original purpose of assisting parents to manage inappropriate behaviours associated with Autism .

Sixty per cent of all parents stated that further investment should be made to ensure that all professionals (including G.P.s, nursery staff and respite/residential care providers) are 'trained' in respect of TEACCH principles to enhance effective co-ordination of their son/daughter's care plan.

Finally, it is important to note that five of the seven adult carers acknowledged the importance of implementing TEACCH at the earliest possible time in their son/daughter's life. In so stating they considered early intervention to increase the likelihood of the effectiveness of the method.

Demand for TEACCH services

One measure of demand for TEACCH may be related to levels of satisfaction expressed by parents and their professional support staff. If this is to be regarded as a measure of demand there appears to be little doubt that the method has wide spread support amongst these groups.

All but five of the twenty six parents of both the children and adult groups reported that they were encouraged by the method and that their initial expectations had changed positively since its introduction. For example, parents reported that they now understood the method and its potential for assisting in the development of adaptive social, self-help and behavioural skills and noted that the structured approach had enabled considerable improvements in the quality of life experienced by their sons/daughters. Five of the parents included in the adult study also stated that they 'wished that it had been available when their children were younger'.

Positive responses about the desirability and demand for TEACCH were provided by the project team and by professionals. In the latter case this is well supported by 'statement

reports' prepared by educational psychologists who noted the need for the children to be educated within a structured programme setting. The consultant pediatricians and clinical psychologists also commented on the importance of the method as a means of providing an effective method to meet the needs of young people with Autism.

Respondents associated with the adult group also confirmed the demand for TEACCH and reported it to be effective for the small number of people who had actually been 'fortunate enough' to be selected for inclusion in the 'pilot group' at the day service. Others recommended that TEACCH be extended to all respite, residential and day care services irrespective of location.

One other measure of demand is the number of people who have demonstrated interest in learning more about the method. The results of the evaluation of formal consultative and workshop/training activities provided by the TEACCH team have been reported in Chapter Seven of the present report. In addition analysis of the TEACCH project team member's 'log books' demonstrated many requests (and responses) to a range of interested individuals and groups to learn more about TEACCH. Together they provide an impressive testimony of the interest shown in the method (with some 402 persons attending workshops and training events) and confirm the impressive efforts made by the TEACCH project team to share their knowledge and to conduct training despite the limited time and resources that were available to them.

A number of gaps in the range of service provision were reported by respondents including the need to extend the home-based liaison service and to improve access to a wider range of young people and adults to the service (including the implementation of TEACCH in pre-school services, MLD schools and to day care, respite and residential care services).

This section has considered the demand that parents and professionals have placed upon the existing (but limited) TEACCH service. However, whilst the majority of respondents appear to support its effectiveness (and therefore justify the demand for an expansion of the present service) it should be noted that TEACCH has only recently been introduced to Northern Ireland. A small number of professional staff are appropriately trained as yet, which accounts for the fact that the majority of potential clients and carers appear to be unaware of its existence.

The study has illustrated the need for the TEACCH service to be expanded to meet the needs of the majority of people with Autism, at school, work and home. The shift in emphasis on the provision of community care based services (rather than relying on the provision of institutional care) may have increased pressure from parents and professionals to identify and invest in the implementation of effective educational/therapeutic methods to enhance the possibility of acquiring maximum educational, social and health gain for people with Autism and their families.

Measuring the effectiveness of TEACCH

Eleven of the twenty eight professionals rated their overall perceptions of the effectiveness of TEACCH as 'very effective', thirteen rated it as being 'considerably effective' whilst the remaining four persons stated they considered it to be 'somewhat effective'. Ten of the eleven project staff also rated the effectiveness of TEACCH highly - ten rated it as 'very effective' and the other respondent considered it be 'considerably effective'.

Parents were also asked to rate their overall perceptions of the effectiveness of TEACCH. Eleven of the twenty childrens' parents rated it as 'very effective', six as 'considerably effective' and two as 'effective'. The adult parents expressed the following opinions: one

parent rated it as 'very effective', two as 'considerably effective', two others as 'effective' and one did not express an opinion.

More specifically, parents, professionals and project staff were asked to rate its effectiveness against a series of criteria: improving self-help skills, social skills, reduction of problem behaviours, reduction of obsessional behaviours, enhancement of co-ordination skills, improvement of fine and gross motor skills, enhancement of communication skills and improved concentration. (The results are presented in Tables 4.1, 5.1, 6.1 and 8.3).

Over 86% of all respondents³⁰ regarded TEACCH to have been at least 'effective' in assisting subjects to improve their range of self-help skills, 73% expressed an opinion in respect of positive effect on social skill development whilst 79% of all respondents reported a reduction in inappropriate and obsessional behaviour.

Sixty per cent of all respondents noted an improvement in mobility/gross motor skills and 82% reported gains in fine motor skill development. In the areas of communication and concentration results suggest that over 90% of subjects report positive outcomes for clients.

All respondents were also asked to report improvements in the subjects' progress in the specific areas of independence, quality of life, development of new skills, maintenance of existing skills and abilities and interaction skills. These results are reported in Tables 4.2, 5.2, 6.2 and 8.4.

Eighty per cent of all respondents reported that TEACCH had made a difference to the subjects' level of independence and in assisting them to maintain existing levels of skills and to develop new ones. Just under three quarters of all respondents reported that TEACCH had assisted individuals to interact more effectively whilst 90% considered that TEACCH had enhanced the quality of life for subjects.

Analysis of the childrens' PEP scores (see Table 3.3) supports these observations and indicates that TEACCH had been effective in improving the children's adaptive skills and behaviours. Teachers noted that 'impressive' or 'considerable' improvements were made by 13 of the children (65%) in all developmental sub-scales. 'Some' improvement was also noted for a further five (25%) of the children. No improvement was recorded for the remaining two pupils, of whom one was included as a 'control' subject in School 5.

Analysis of the AAPEP and S.T.A.R. results recorded for the adult sample are equally impressive with resultant gains being reported for all seven respondents (see Table 8.1).

The results relating to behavioural change demonstrate a significant reduction in behaviours that were originally rated as moderately to severely inappropriate and the related emergence of substitute appropriate behaviours for the children's sample. This appears to be consistent across the range of sub-scores presented in Chapter 3. An actual 'significant' deterioration in behaviour was reported for the 'control' child who attended school 5.

Anecdotal evidence provided by parents, professionals and class teachers also suggests that there had been a significant reduction in the incidence of inappropriate behaviours. Similar evidence was found following analysis of the childrens' class notes and school reports where all but two of the twenty children were reported to have improved in respect of their behaviour.

The adult sample also demonstrated very significant changes in the incidence of inappropriate behaviours with a reduction (or remission) of over 76% for all reported inappropriate behaviours for the seven clients.

It would appear therefore that TEACCH has proven to have been effective in a range of adaptive skill areas and has succeeded in assisting the reduction of inappropriate behaviours for a significant number of children and adults.

The effectiveness of the TEACCH environment

Mesibov et al (1988) report upon the importance of TEACCH being delivered by appropriately trained personnel in environments that had been appropriately adapted to meet the specific needs of each child/adult. The teachers involved in the child and adult studies were appropriately trained in TEACCH methods (with the exception of the 'control' child teacher in the children's study).

The final section included in Chapter 3 reported upon the extent to which the structural features/elements of each of the five schools featured in the present study supported the implementation of TEACCH methods. Evidence was collected following personal observation of each class, self-reports from teachers and from an objective evaluation of the extent to which each the structured classrooms in Schools 1 and 2 rated against criteria included in the 'TEACCH Structured Teaching Model Classroom' questionnaire (see Appendix Two).

Those children who were integrated within generic classes appeared to significantly gain new skills and abilities. Those in structured classes also made considerable gains, but not to the same extent as their peers. No differences were found to exist between Schools 1,2,3, and 4 in respect of reported behavioural change. However, some notable differences were found when these schools were compared to School 5. These results may be significant when related to the actual 'developmental gain' that children achieved across the five schools included in the study. It is significant to note that the 'control' child in School 5 achieved the lowest results for the children's cohort (see Table 3.3), thus indicating a possible correlation between the extent to which the classroom structure and the presence of a TEACCH trained teacher affects learning and enhances developmental gain for pupils/clients.

The adult group benefited from an appropriately structured TEACCH 'room' and despite the 'temporary' nature of the building it appears that significantly positive 'gains' were made by subjects in areas of developmental and adaptive behavioural change.

It would appear therefore that there is advantage in ensuring that all TEACCH learning environments are appropriately structured in accordance with the actual assessed needs of clients in order to maximise educational and developmental gain for pupils/clients.

Issues of quality and effectiveness

Positive advantages relating to the full implementation of TEACCH were noted by parents as being a reduction in behaviour problems (10 respondents), improvement in communication (7 respondents), happier sons/daughters (7 respondents), the provision of predictable routines (5 respondents) and the reduction of frustration experienced by children (4 respondents).

Positive advantages relating to TEACCH reported by professionals and project staff were noted as being an observed reduction in behaviour problems (14 respondents), the

provision of structured routines (11 respondents), improvement in communication (8 respondents), and its potential for implementation and ownership by parents and carers. Other comments were also provided about the extent to which it enhanced client concentration and reduced perceived stress amongst carers (6 respondents). Seven persons also noted that carers had reported reduced stress and the development of improved coping strategies.

The main weaknesses of TEACCH were reported by professionals and project staff as being: a time consuming method (6 respondents), difficulty in transferring the approach to the home/care setting (6 respondents) and the lack of additional training opportunities and ongoing support for TEACCH at home (5 respondents). Four people reported difficulties in maintaining client motivation in the system whilst three others mentioned difficulties with 'imposing' TEACCH methods within the context of home-life/family routines. Nine respondents also requested that more staff should be appointed to work with TEACCH at school and in day care settings and emphasised the importance of school/work and home-based liaison. Respondents reported the following gaps in the present provision of TEACCH:

- Inadequate preparation for parents (5 respondents)
- under-developed home based liaison services (5 respondents)
- lack of diagnostic and pre-school services (4 respondents)
- restricted training opportunities for staff and parents (4 respondents)
- under-resourced provision for TEACCH in adult day care/residential services (4 respondents)

The main weaknesses of TEACCH were reported by parents as being: time consuming (8 respondents), intrusive to the normal pattern of domestic life (6 respondents) and the lack of additional training and ongoing support for TEACCH at home (5 respondents). Nine parents also reported that TEACCH militated against parental involvement with other members of the family (a source of reported tension in the family) and five others commented on the lack of time for other additional commitments at home. The 'excessive' time required for initial training was also mentioned by four respondents.

Barriers to effectiveness were therefore reported by a significant number of respondents in one form or another. Perhaps the most significant problem was related to inadequate staffing levels which meant that the TEACCH team were unable to meet the considerable needs of all clients requiring these methods (and to provide an effective home liaison service for those already using TEACCH).

The effect of extending the service to other children and adults would most likely lead to over-subscription and the difficulties that would undoubtedly be encountered in providing the service to a range people with Autism of all ages and all dependencies throughout the Province will act as barriers to service effectiveness and quality. Further investment will be required to provide more trained TEACCH staff if these methods are to be expanded within a range of schools, day services and residential settings (and of course the home setting).

Both carers and professionals equated the presence of experienced and skilled TEACCH staff with their perception of service quality. It is therefore recommended that attention be given to extending the number of teachers and health staff who are competent in the implementation of TEACCH. This may be achieved by extending the range of skills possessed by special education teachers, community mental handicap nurses, social workers and clinical psychologists with the aim of incorporating the TEACCH methods into their daily work routines. Such an approach must be adequately supported by the provision of appropriately trained TEACCH co-ordinators in each locality who should act as consultants to a range of parents, carers and professionals engaged in the implementation of TEACCH methods.

Financial considerations

All service commissioners and providers will undoubtedly be concerned to ensure that any further investment in TEACCH provides them with 'value for money'. The present study has demonstrated that clients do significantly benefit from TEACCH in a number of ways. In the first place there is a reported increase in the number of social and self-help skills that have been acquired by the twenty seven subjects included in the study. A significant reduction in the number of inappropriate behaviours has also been reported.

Project staff and professional workers were also invited to comment on the extent to which they considered that TEACCH had contributed to the maintenance of persons with 'challenging behaviour' in the community (and therefore avoiding long-term hospitalisation). Seven clients were identified by respondents as having been assisted in avoiding longer term hospitalisation as the direct influence of TEACCH. This may be regarded as an indicator of cost-effectiveness.

The provision of an effective TEACCH service will undoubtedly require further investment in the provision of appropriately structured TEACCH 'classrooms'/work settings where considered to be necessary, in the provision of comprehensive training events for staff (and parents) and in the appointment of a range of 'TEACCH co-ordinators'. However, it is suggested that an effective service might be provided by introducing TEACCH into the mainstream activities of community support staff and teachers (as described above). The success of extending access to TEACCH will be dependent upon the adoption of this approach and as such it is recommended that TEACCH should be regarded as a primary method of educational and therapeutic intervention for all persons with Autism who are considered able to benefit from it. As such it should not be afforded special 'project status' but should be regarded as a feature of mainstream service provision throughout Northern Ireland. The necessary resources required to realise this objective should be determined and costed.

The effectiveness of the TEACCH consultancy service and training activities

One of the main objectives of the TEACCH project was reported to be the dissemination of information about TEACCH and to transfer knowledge and skills to enable the method to be effectively implemented in a range of settings. The Project Team was engaged in the provision of an extensive range of workshops and related training events. The results arising from the evaluation of these activities were reported in Chapter 7.

Staff presented a total of nineteen workshops (representing 29 training days) between May 1994 and October 1995. These ranged from one day introductory courses on TEACCH to two and three day skills based workshops.

A total of 402 persons participated in the workshops and of these 324 (81%) reported that they had found the quality of the workshops to have been 'very worthwhile', a further 73 (18%) stated that the workshops had been 'satisfactory', whilst only five (1%) respondents reported that they had been disappointed with the effectiveness of the training event. All participants (100%) reported that they would 'recommend' the workshops to their colleagues.

Analysis of formal evaluation reports of the nineteen training events provided by the TEACCH project team demonstrates that participants rated the workshops as being 'very effective'. The evaluation reports are further supported by documentary evidence provided by a number of workshop participants.

In addition all respondents included in the children and adult studies (including parents, and professionals), reported that they had received support from members of the TEACCH project team. Eighty per cent of all respondents reported that this had been effective in assisting them to understand (and in some cases) to implement TEACCH.

However, as has been reported elsewhere in the present study, several respondents reported that there was a need for the provision of additional support at home and in a range of day care, residential and respite care services. A number of respondents also reported the need for further investment in extending the availability of TEACCH training/workshop events.

It is acknowledged that despite the fact that the consultancy and training service provided by the TEACCH team has been regarded as being 'very effective' there is a need for further expansion of this component of the team's work (the consequence of which will undoubtedly require the provision of additional resources to realise this objective)..

Organisational issues

TEACCH was originally implemented by a teacher and two health service professionals who integrated the method within their everyday work practices. In 1994 local employers from education and health and social service provider agencies responded to a request from the Autism charity PAPA to provide additional funding to assess the effectiveness of the method. In so doing the 'team' was afforded project status and an operational policy was designed and implemented. Additional funds were released by agency staff to expand the scope of the TEACCH service with the result that the 'project team' was increased to include one additional Specialist Teacher for the children's group.

Members of the 'project team' have consistently reported that the successes attributed to TEACCH have arisen from the team approach that had been created prior to the implementation of the 'project'. However, all members of the TEACCH team have acknowledged that the additional finances allocated to TEACCH have been crucial to the success of the project.

It appears, however that the success of the project has been more attributable to effective teamwork rather than to the creation of 'project status'. As such consideration should be given to encouraging inter-professional teamwork between education and health and social service staff with the aim of encouraging the effective co-ordination and delivery of TEACCH.

Limitations of the present study

A key limitation of the present study is the fact that it was carried out in one specific area in Northern Ireland and as a consequence is not representative of other areas in the Province. Unfortunately no other area in the Province had invested sufficient resources to implement the TEACCH method to enable regional comparisons to be made.

The time scale for the study also produced additional difficulties for the researchers in that the twelve months available for the collection of data (in four inter-related phases) was insufficient to acquire additional insight into the needs and perceptions of those involved in the delivery and receipt of TEACCH. The collection of comparative performance data (between pre and post tests) data was also restricted to the time interval set for the study. In addition the time scale of the study did not permit an in-depth analysis of carers expectations and perceptions of TEACCH (following its implementation with their sons/daughters).

The study also focuses on data in respect of the needs of persons living in the community in Northern Ireland. Consequently, although the information offers valuable insight into the needs of those clients who are not currently residing in long stay accommodation provided by either the statutory or non-statutory sector, it may not be possible to generalise the findings (outwith the geographical area of the study population) in respect of all persons with Autism who are presently residing in long stay institutional service accommodation.

The absence of a comprehensive baseline psychometric data for the majority of subjects included in the study also inhibited the opportunity to compare or validate) pre and post test results. It is recommended that subjects are re-tested in approximately twelve months time in order to compare PEP/AAPEP and psychometric results with those reported to have been attained by the 27 subjects included in the present study.³¹

The study was intended to investigate the perceptions of a number of key respondent groups about the range and quality of TEACCH delivered to people with Autism or related communication disorder. The inter-dependence of these groups suggests that the reliability of the data collected was enhanced and that a comprehensive over-view of the effectiveness of TEACCH was obtained.

Finally, it is acknowledged by the researchers that the absence of an effective control group limits the extent to which the actual 'gains' attributed to TEACCH were a consequence of the method (and not to processes of actual ageing/maturity or other contingent variables). Consequently it is suggested that interpretation of the results presented in the present study (that are attributed to the influence of TEACCH) should be treated with cautious optimism³².

CHAPTER 10

Conclusion and Recommendations

This study has demonstrated that TEACCH has assisted individuals with Autism to enhance their range of adaptive skills; a significant decrease in the number of maladaptive behaviours has also been witnessed. The population participating in the TEACCH programme in Northern Ireland is significantly different from the one addressed by Division TEACCH in North Carolina. The latter is composed of children and adolescents of average cognitive ability whereas the Northern Ireland study has chosen to include people of all ages, who for the most part, have a severe learning disability³³.

The present study has demonstrated that TEACCH methods may be successfully implemented for a wide range of people with Autism, with varying ages and degrees of intellectual disability. The results are impressive but must be treated with caution in the absence of a reliable group for comparison of test results. However, corroborated evidence obtained from parents, professionals and project staff suggests that TEACCH has significantly influenced the quality of life for people with Autism, their carers and support staff.

The influence that TEACCH has brought to bear on key stakeholders relates to the adaptability of the methods to meet individual needs and the structure that it introduces and brings to bear on the lives of people who have significant difficulties in comprehending verbal instructions and with sensory over-stimulation. Despite the fact that some families have found it difficult to accept the importance of adopting a structured approach to teaching and learning for their sons and daughters the majority have acknowledged the desirability of giving further consideration to adopting the approach for use at home.

The study has highlighted the need for TEACCH personnel to be appropriately trained and for the method to be implemented (wherever possible) in accordance with the persons' assessed need for structured routines and procedures. It is reliant upon the generation and maintenance of effective teamwork between professionals and carers and the creation of an 'effective treatment milieu' (both of which are pre-requisites for its successful implementation).

TEACCH was originally introduced to several of the children included in the study some five years ago. At that time its success was attributed to the skill and commitment of a few dedicated teachers and health care professionals who worked together as a co-ordinated team. In 1994 TEACH was afforded 'project status' in the study area and aimed to create a discrete team identity for the TEACCH team. On reflection the concept of 'project status' has done little to enhance the quality of TEACCH implementation strategies in the area. Rather TEACCH has continued to be implemented and maintained by a group of individual teachers and health service therapists committed to integrating TEACCH methods into their everyday working practice. It is for this reason, therefore that it is concluded that TEACCH may be effectively implemented within mainstream education, health and social services, supported by appropriately skilled and experienced TEACCH Co-ordinators in each locality

It should also be acknowledged that TEACCH has been implemented at a time of change in all statutory services characterised by service constraint. Despite these difficulties TEACCH has emerged as an effective method designed to meet the needs of people with Autism. However, despite reported successes, a number of specific needs remain unfulfilled and present challenges to service planners and providers to enhance the range and quality of service provision for users and their families.

One of the most important issues relates to the potential that TEACCH may have for enabling people with severe Autism and challenging behaviour to remain living fulfilled lives in the community. Initial results are encouraging and suggest that TEACCH may be instrumental in enabling some people with such severe behavioural difficulties to avoid long-term hospitalisation in the future. However it is important that the capacity of the emergent TEACCH service is enhanced so that it can meet the full range of needs of people with Autism, irrespective of age, dependency or locality, thus reducing dependence on mental handicap or psychiatric hospitals for longer term support or respite care. As such it might be described as a cost-effective method of service delivery.

One other key implication for future service planning relates to the maintenance and enhancement of the provision of a skilled, experienced and responsive team of persons trained and enabled to devote adequate periods of time to TEACCH. Such persons should expand the TEACCH service to provide more effective support to parents and carers at home and should work collaboratively with home based support workers such as community mental handicap nurses, speech and language therapists pre-school teachers and clinical psychologists in order to initiate and maintain contact with families.

Planning for the future will depend upon the effective acquisition of information about the needs of clients and carers and the ability of services/facilities to meet those needs. Improved channels of communication will be necessary to ensure that information from "the front line" of service experience and delivery are made accessible to service planners/providers in order to ensure that new models of service delivery are responsive to the actual needs and experiences of people with Autism and their carers.

In conclusion, this study has demonstrated that TEACCH is both an innovative and effective method for enhancing the quality of life for children and adults. In addition of paramount importance is the fact that parents, professionals and project staff have reported improvements in client behaviour and skill acquisition.

The present study has contributed towards the exploration of these issues and has provided insight into the current range of service provision and its perceived effectiveness by a range of stakeholders. The challenge for service providers and commissioners in the future will be to ensure that a full range of responsive services (including the provision of TEACCH) is made available to people with Autism and that they are relevant to meet the individual needs of service users and their families. Such services should also provide comprehensive, individual assessment and evaluation procedures to ensure that they remain effective and responsive. In so doing, contract compliance should be monitored and individuals and their families afforded opportunities to enhance their potential to enjoy purposeful lives in their local communities.

Finally acknowledgement is made to the members of the TEACCH project team and P.A.P.A for their most considerable personal and persistent efforts in introducing and implementing TEACCH in Northern Ireland. Through their efforts TEACCH has improved the quality life of people with Autism and their carers and has been recognised as an effective method of intervention for this client group.

Recommendations

1- The Provision of Effective Information Systems

- 1.1 Providers of TEACCH should ensure that published information relating to TEACCH is available for both carers and professionals.
- 1.2 Providers of TEACCH should review their present method for conveying information regarding TEACCH to potential service users (and their support staff).

2- The Provision of Education and Training

- 2.1. Local service providers should extend the range of TEACCH educational and training opportunities for parents, carers and professionals.

3- The Provision of Home Based Support

- 3.1 More attention should be given to providing more home based support for parents/carers with the aim of assessing (and enhancing) their present and potential capacity to implement TEACCH at home.
- 3.2 The process and time required to ensure that parents/carers are encouraged to use TEACCH methods at home (and are satisfied with the service provided), must be incorporated into any procedures developed to assist in the implementation of the method.
- 3.3. TEACCH personnel should provide parents with monthly written progress reports to encourage parents in the implementation of the method at home.
- 3.4 The need for practical advice on how to structure programmes and on how to accommodate the varying (and sometimes rigorous) demands that TEACCH places on family life was also reported.

4- Assuring Quality

- 4.1. Purchasers and providers should consider more constructive and effective ways of gaining insight into the way in which parents and people with Autism perceive the actual quality of educational/therapeutic service provision.
- 4.2 The quality of existing services, including preparation for TEACCH and follow-up at home, school and work needs to be further studied and evaluated.

5- Improving Access to TEACCH

- 5.1. Those responsible for purchasing, providing or arranging services should ensure that TEACCH is accessible for all persons with Autism and related communication disorders who are considered to be able to benefit from the method. As such the current range of TEACCH provision should be reviewed in each locality with the aim of ensuring that there is equity of access to TEACCH for persons of all ages.
- 5.2. The specific needs of adolescents and adults with Autism and associated challenging behaviours) should be acknowledged and responded to and appropriate responses designed and implemented at home, in day and in residential services.

6- Organisational and Resource Issues

- 6.1. Attention should be given to extending the number of teachers and health and social service staff who are competent to implement TEACCH. This may be achieved by extending the range of skills possessed by special education teachers, community learning disability nurses, social workers and clinical psychologists with the aim of incorporating the TEACCH methods into their daily work routines.
- 6.2. Attention should be given to the provision of local TEACCH co-ordinators to assist in implementation of TEACCH within local mainstream domiciliary, educational and health and social care service facilities.
- 6.3. TEACCH should be regarded as a primary method of educational and therapeutic intervention for all persons with Autism who are considered able to benefit from the approach. As such it should not be afforded special 'project status' but should be regarded as a feature of mainstream service provision throughout Northern Ireland. The necessary resources required to realise this objective should be determined and costed.
- 6.4. All TEACCH environments should be appropriately structured in accordance with the assessed needs of each service user in order to maximise educational and developmental gain for pupils/clients.
- 6.5. Subjects included in the present study should be re-tested in approximately twelve months time in order to compare PEP/APEP and psychometric results with those reported to have been attained by subjects in the present study.

APPENDIX ONE

**TEACCH Evaluation Questionnaires: Parents; Project staff and
Professionals**

TEACCH EVALUATION - PARENTS

QUESTIONNAIRE

Date of completion:

CODE NO:

We are conducting an evaluation on behalf of PAPA which aims to collect information from carers, teachers, professional staff (and other interested persons) in respect of the quality and effectiveness of the TEACCH programme provided by the South Eastern Education and Library Board, the Down and Lisburn Health and Social Services Trust and PAPA.

All questions relate to implementation and development of TEACCH methods in Northern Ireland since their inception in 1990.

We would like to assure you that any information provided will be treated in the strictest confidence and that individual responses will remain anonymous. We would be most grateful for your assistance in this study!

SECTION 1: PERSONAL PROFILE

1- Please provide details of your involvement (if any) with TEACCH.

3- Describe how effective TEACCH methods have been in meeting your child's needs.

Very Effective	Considerably Effective	Effective	Not Effective	Don't Know

4- Describe how effective TEACCH methods have been in respect of the following:

a) Improving self help skills:

Very Effective	Considerably Effective	Effective	Not Effective	Don't Know

COMMENTS

b) Improving social skills:

Very Effective	Considerably Effective	Effective	Not Effective	Don't Know

COMMENTS

c) Reducing difficult or problem behaviours:

Very Effective	Considerably Effective	Effective	Not Effective	Don't Know

COMMENTS

d) Reducing obsessional/compulsive behaviours:

Very Effective	Considerably Effective	Effective	Not Effective	Don't Know

COMMENTS

e) Improving the range of co-ordination skills:

Very Effective	Considerably Effective	Effective	Not Effective	Don't Know

COMMENTS

f) Improving the range of mobility skills:

Very Effective	Considerably Effective	Effective	Not Effective	Don't Know

COMMENTS

g) Improving communication skills:

Very Effective	Considerably Effective	Effective	Not Effective	Don't Know

COMMENTS

h) Improving concentration?

A Great Difference	Some Difference	Little Difference	No Difference	Don't Know

COMMENTS

5- Has TEACCH made any difference to your son/daughter in the following areas?:

a) independence:

A Great Difference	Some Difference	Little Difference	No Difference	Don't Know

COMMENTS

b) quality of life:

Very Effective	Considerably Effective	Effective	Not Effective	Don't Know

COMMENTS

c) developing new skills:

A Great Difference	Some Difference	Little Difference	No Difference	Don't Know

COMMENTS

d) maintaining existing skills and abilities:

Very Useful	Considerably Useful	Useful	Not at All Useful	Don't Know

COMMENTS

e) interacting with other people

To a great extent	To a considerable extent	To some extent	Not at All	Don't Know

COMMENTS

6- How useful do you think TEACCH has been to you and your family?

A Great Difference	Some Difference	Little Difference	No Difference	Don't Know

COMMENTS

7- Have you been using TEACCH at home?

.....YES

.....NO

7a-If yes please tell us for how long:

7b- If no, are there any specific reasons why you have not used TEACCH at home?

8- To what extent do you consider that TEACCH methods can be transferred and implemented in the home setting?:

A Great Difference	Some Difference	Little Difference	No Difference	Don't Know

COMMENTS

9- What do you consider the main strengths of TEACCH to be?

10- What do you consider the main weaknesses of TEACCH to be?

SECTION 4

1- What preparation was provided for your son/daughter and family before TEACCH was implemented?

a) For your son/daughter:

b) For you and your family:

2- Can you identify any difficulties that you consider might hinder the implementation of TEACCH at home?

3- What gaps, if any, do you perceive in the present provision of TEACCH?

4- What do you feel has been most valuable about TEACCH?

5- Have you ever attended parent training about TEACCH?

.....YES

.....NO

If so how useful do you consider it to have been?

Very Effective	Considerably Effective	Effective	Not Effective	Don't Know

6- Have you ever received advice or support on the implementation of TEACCH from a member of the TEACCH Project team?

.....YES

.....NO

6a- If so how effective do you consider the advice to have been?

Very Useful	Considerably Useful	Useful	Not at All Useful	Don't Know

7- Do you have any recommendations that would enable TEACCH to be more effectively implemented?

Thank you for assisting in the completion of this questionnaire.

TEACCH EVALUATION - PROJECT STAFF

QUESTIONNAIRE

Date of completion:

CODE NO:

We are conducting an evaluation on behalf of PAPA which aims to collect information from carers, teachers, professional staff (and other interested persons) in respect of the quality and effectiveness of the TEACCH programme provided by the South Eastern Education and Library Board, the Down and Lisburn Health and Social Services Trust and PAPA.

All questions relate to implementation and development of TEACCH methods in Northern Ireland since their inception in 1990.

We would like to assure you that any information provided will be treated in the strictest confidence and that individual responses will remain anonymous. We would be most grateful for your assistance in this study!

SECTION 1: PERSONAL PROFILE

1- Please describe your current job title and work location:

2- Please provide details of your involvement (if any) with TEACCH.

SECTION 2: TEACCH METHODS.

1- Do you believe that carers and professionals know who to contact to access TEACCH?

Carers	YES	<input type="checkbox"/>	NO	<input type="checkbox"/>
Professionals	YES	<input type="checkbox"/>	NO	<input type="checkbox"/>

2- Please indicate if any of your pupils/clients have gained access to TEACCH through the following channels:

* Please tick all answers as appropriate.

	YES	NO
Directly (self referral)		
Educational Psychologists		
General Practitioners		
Consultant Medical Staff		
Community Nurses		
Clinical Psychologists		
Speech and Language Therapists		
Senior Community Medical Staff		
Day Care Works		
Teachers		
Voluntary Services		
Other (please specify)		

3- How did you find out about TEACCH?

4- How effective do you consider the distribution and availability of information about TEACCH to have been?

Very Effective	Considerably Effective	Somewhat Effective	Not Effective	Don't Know

SECTION 3: ISSUES RELATING TO THE QUALITY OF TEACCH

1- What were your initial expectations of TEACCH?

2- Have your expectations changed at all since your initial introduction to TEACCH?

.....Yes
No

If yes, how have they changed?

3- For those pupils/clients who use TEACCH, describe below how effective you consider the methods to have been in meeting their needs.

Very Effective	Considerably Effective	Effective	Not Effective	Don't Know

PLEASE TICK THE APPROPRIATE BOX IN THE FOLLOWING QUESTIONS. YOU MAY PROVIDE ADDITIONAL INFORMATION IN THE SPACES PROVIDED.

4- Describe how effective TEACCH methods have been in respect of the following:

a) Improving self help skills:

Very Effective	Considerably Effective	Effective	Not Effective	Don't Know

COMMENTS

b) Improving social skills:

Very Effective	Considerably Effective	Effective	Not Effective	Don't Know

COMMENTS

c) Reducing difficult and inappropriate behaviours:

Very Effective	Considerably Effective	Effective	Not Effective	Don't Know

COMMENTS

d) Reducing obsessional/compulsive behaviours:

Very Effective	Considerably Effective	Effective	Not Effective	Don't Know

COMMENTS

e) Improving the range of fine motor skills:

Very Effective	Considerably Effective	Effective	Not Effective	Don't Know

COMMENTS

f) Improving the range of gross motor skills:

Very Effective	Considerably Effective	Effective	Not Effective	Don't Know

COMMENTS

g) Improving communication skills:

Very Effective	Considerably Effective	Effective	Not Effective	Don't Know

COMMENTS

h) Improving concentration?

Very Effective	Considerably Effective	Effective	Not Effective	Don't Know

COMMENTS

5- Has TEACCH made any difference to your client/pupil in the following areas?:

a) independence:

A Great Difference	Some Difference	Little Difference	No Difference	Don't Know

COMMENTS

b) quality of life:

A Great Difference	Some Difference	Little Difference	No Difference	Don't Know

COMMENTS

c) developing new skills:

A Great Difference	Some Difference	Little Difference	No Difference	Don't Know

COMMENTS

d) maintaining existing skills and abilities:

A Great Difference	Some Difference	Little Difference	No Difference	Don't Know

COMMENTS

e) interacting with other people

A Great Difference	Some Difference	Little Difference	No Difference	Don't Know

COMMENTS

6- Overall, do you consider that your pupils/clients experience a better quality of life following the implementation of TEACCH?

Very much so	Considerably	Somewhat	Not at All

COMMENTS

7- Overall how would you rate the impact of TEACCH?

Very Good	Good	Quite Good	Poor	Don't Know

COMMENTS

8- To what extent do you consider that TEACCH has been integrated between home and school/day care settings?:

Very Considerably	Considerably	Somewhat	Not at All	Don't Know

9- To what extent do you consider that TEACCH methods can be transferred and implemented in settings other than structured class rooms in schools and day care environments?

To a great extent	To a considerable extent	To some extent	Not at All	Don't Know

COMMENTS

10- Are you aware of any person who has been in receipt of TEACCH who has been able continue to remain living in the community and who might otherwise have been admitted to long-stay mental handicap settings?

YES.....

NO.....

10a- If you answered YES to question 10 above - to what extent do you consider that TEACCH methods actually contributed to enabling this person/persons to continue to remain living in the community (i.e. outwith hospital settings)?

To a great extent	To a considerable extent	To some extent	Not at All	Don't Know

10b- Please provide further information on how TEACCH has enabled this person/persons to continue to remain living in the community (i.e. outwith hospital settings).

COMMENTS

11- What do you consider the main strengths of TEACCH to be?

12- What do you consider the main weaknesses of TEACCH to be?

4- Have you ever attended an introductory one day conference on TEACCH?

.....YES
.....No

If yes how useful do you consider it to have been?

Very Useful	Considerably Useful	Somewhat Useful	Not Useful	Don't Know

5- Have you ever attended a three day conference on the implementation of TEACCH?

.....YES
.....No

If so how useful do you consider it to have been?

Very Useful	Considerably Useful	Somewhat Useful	Not Useful	Don't Know

6- Have you ever attended a 5 day TEACCH workshop?

.....YES
.....No

If yes how useful do you consider it to have been?

Very Useful	Considerably Useful	Somewhat Useful	Not Useful	Don't Know

7- How many clients/pupils do you currently use TEACCH with each week (if any)?

8- For each client/pupil please estimate how many hours (on average per week) TEACCH methods are in use.

9- Please tell us how long you have been using TEACCH methods?

10- How long have you worked with people with Autism?

More than 5 Years	3 - 4 Years	2 - 3 Years	1 - 2 Years	Not at All

11- Please describe your current level of awareness/knowledge/experience about the needs of people with Autism:

Very Aware	Considerably Aware	Somewhat Aware	Not at All	Don't Know

12- Do you have any recommendations that would enable TEACCH to be more effectively implemented?

Thank you for assisting in the completion of this questionnaire.

TEACCH EVALUATION _ PROFESSIONALS

QUESTIONNAIRE

Date of completion:

CODE NO:

We are conducting an evaluation on behalf of PAPA which aims to collect information from carers, teachers, professional staff (and other interested persons) in respect of the quality and effectiveness of the TEACCH programme provided by the South Eastern Education and Library Board, the Down and Lisburn Health and Social Services Trust and PAPA.

All questions relate to implementation and development of TEACCH methods in Northern Ireland since their inception in 1990.

We would like to assure you that any information provided will be treated in the strictest confidence and that individual responses will remain anonymous. We would be most grateful for your assistance in this study!

SECTION 1: PERSONAL PROFILE

1- Please describe your current job title and work location:

2- Please provide details of your involvement (if any) with TEACCH.

SECTION 2: TEACCH METHODS.

1- Do you believe that carers and professionals know who to contact to access TEACCH?

Carers	YES	<input type="checkbox"/>	NO	<input type="checkbox"/>
Professionals	YES	<input type="checkbox"/>	NO	<input type="checkbox"/>

2- Please indicate if any of your pupils/clients have gained access to TEACCH through the following channels:

* Please tick all answers as appropriate.

	YES	NO
Directly (self referral)		
Educational Psychologists		
General Practitioners		
Consultant Medical Staff		
Community Nurses		
Clinical Psychologists		
Speech and Language Therapists		
Senior Community Medical Staff		
Day Care Works		
Teachers		
Voluntary Services		
Other (please specify)		

3- How did you find out about TEACCH?

4- How effective do you consider the distribution and availability of information about TEACCH to have been?

Very Effective	Considerably Effective	Effective	Not Effective	Don't Know

SECTION 3: ISSUES RELATING TO THE QUALITY OF TEACCH

1- What were your initial expectations of TEACCH?

2- Have your expectations changed at all since your initial introduction to TEACCH?

-Yes
-No

If yes, how have they changed?

3- For those pupils/clients who use TEACCH, describe below how effective you consider the methods to have been in meeting their needs.

Very Effective	Considerably Effective	Somewhat Effective	Not Effective	Don't Know

PLEASE TICK THE APPROPRIATE BOX IN THE FOLLOWING QUESTIONS. YOU MAY PROVIDE ADDITIONAL INFORMATION IN THE SPACES PROVIDED.

4- For those pupils/clients who use TEACCH, describe below how effective you consider the methods to have been in respect of the following:

a) Improving self help skills:

Very Effective	Considerably Effective	Effective	Not Effective	Don't Know

COMMENTS

b) Improving social skills:

Very Effective	Considerably Effective	Effective	Not Effective	Don't Know

COMMENTS

c) Reducing difficult and inappropriate behaviours:

Very Effective	Considerably Effective	Effective	Not Effective	Don't Know

COMMENTS

d) Reducing obsessional/compulsive behaviours:

Very Effective	Considerably Effective	Effective	Not Effective	Don't Know

COMMENTS

e) Improving the range of fine motor skills:

Very Effective	Considerably Effective	Effective	Not Effective	Don't Know

COMMENTS

f) Improving the range of gross motor skills:

Very Effective	Considerably Effective	Effective	Not Effective	Don't Know

COMMENTS

g) Improving communication skills:

Very Effective	Considerably Effective	Effective	Not Effective	Don't Know

COMMENTS

h) Improving concentration?

Very Effective	Considerably Effective	Effective	Not Effective	Don't Know

COMMENTS

5- Has TEACCH made any difference to your pupil/client in the following areas?:

a) independence:

A Great Difference	Some Difference	Little Difference	No Difference	Don't Know

COMMENTS

b) quality of life:

A Great Difference	Some Difference	Little Difference	No Difference	Don't Know

COMMENTS

c) developing new skills:

A Great Difference	Some Difference	Little Difference	No Difference	Don't Know

COMMENTS

d) maintaining existing skills and abilities:

A Great Difference	Some Difference	Little Difference	No Difference	Don't Know

COMMENTS

e) interacting with other people

A Great Difference	Some Difference	Little Difference	No Difference	Don't Know

COMMENTS

6- Overall, do you consider that your pupils/clients experience a better quality of life following the implementation of TEACCH?

A Great Difference	Some Difference	Little Difference	No Difference	Don't Know

COMMENTS

7- Overall how would you rate the impact of TEACCH?

Very Good	Good	Quite Good	Poor	Don't Know

COMMENTS

8- To what extent do you consider that TEACCH has been integrated between home and school/day care settings?:

To a great extent	To a considerable extent	To some extent	Not at All	Don't Know

COMMENTS

9- To what extent do you consider that TEACCH methods can be transferred and implemented in settings other than structured class rooms in schools and day care environments?

To a great extent	To a considerable extent	To some extent	Not at All	Don't Know

COMMENTS

10- Are you aware of any person who has been in receipt of TEACCH who has been able continue to remain living in the community and who might otherwise have been admitted to long-stay mental handicap settings?

YES.....

NO.....

10a- If you answered YES to question 10 above - to what extent do you consider that TEACCH methods actually contributed to enabling this person/persons to continue to remain living in the community (i.e. outwith hospital settings)?

To a great extent	To a considerable extent	To some extent	Not at All	Don't Know

11- What do you consider the main strengths of TEACCH to be?

12- What do you consider the main weaknesses of TEACCH to be?

SECTION 4

The following questions relate to the views of Professionals, Providers and Commissioners associated with the provision of TEACCH:

1- How often has the TEACCH Project been able to respond to appropriate referrals during the past twenty four months?

2- How often has the TEACCH Project been unable to respond to appropriate referrals during the past twenty four months?

2a- What reasons would you identify for this?

3- What preparation was provided for potential service users and carers before TEACCH was implemented?

a) For the Client/pupil:

b) For the Family/ Carer:

4- Can you identify any difficulties that you consider might hinder the implementation TEACCH within the home environment?

5- What gaps, if any, do you perceive in the present provision of TEACCH?

6- What do you consider to be the most important criteria for measuring the effectiveness of TEACCH?

7- Have you ever attended an introductory one day conference on TEACCH?

.....YES
.....No

If yes how useful do you consider it to have been?

Very Useful	Considerably Useful	Somewhat Useful	Not Useful	Don't Know

8- Have you ever attended a three day conference on the implementation of TEACCH?

.....YES
.....No

If so how useful do you consider it to have been?

Very Useful	Considerably Useful	Somewhat Useful	Not Useful	Don't Know

9- Have you ever attended a 5 day TEACCH workshop?

.....YES
.....No

If yes how useful do you consider it to have been?

Very Useful	Considerably Useful	Somewhat Useful	Not Useful	Don't Know

10 How many clients/pupils do you currently use TEACCH with each week (if any)?

11- For each client/pupil please estimate how many hours (on average per week) TEACCH methods are in use.

12- Please tell us how long you have been using TEACCH methods?

13- How long have you worked with people with Autism?

More than 5 Years	3 - 4 Years	2 - 3 Years	1 - 2 Years	Not at All

14- Please describe your current level of awareness/knowledge/experience about the needs of people with Autism:

Very Aware	Considerably Aware	Somewhat Aware	Not at All	Don't Know

15- Have you ever received advice or support on the implementation of TEACCH from a member of the TEACCH Project team?

.....YES

.....NO

15a- If yes how effective do you consider it to have been?

Very Effective	Considerably Effective	Somewhat Effective	Not Effective	Don't Know

16- Do you have any recommendations that would enable TEACCH to be more effectively implemented?

Thank you for assisting in the completion of this questionnaire.

APPENDIX TWO

Elements of a TEACCH Structured Teaching Model Classroom Questionnaire

ELEMENTS OF A TEACCH STRUCTURED TEACHING MODEL CLASSROOM

CHECKLIST OUTLINING GOALS TO BE ACHIEVED DURING
THE FIRST PHASE OF CLASSROOM CONSULTATION

1. Physical Structure

2. Classroom Schedules/Work Systems

3. Communication Systems

4. IEP Goals

5. Behaviour Management

6. Parent Involvement

7. Maintenance of Model

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ELEMENTS OF A TEACCH STRUCTURED TEACHING MODEL CLASSROOM

1. Physical Structure is Efficient and Clear

Date Achieved:

Goal:

1. Areas for group work, individual work, play and leisure and transition are all clearly and visually defined.
2. Daily activities are consistently associated with specific areas of the room.
3. Classroom arrangement allows for easy supervision of all students at all times.
4. Physical arrangement allows for easy transition between activities and locations.
5. The room is as distraction free as possible, but appropriately and pleasantly decorated.
6. Materials and furniture in each area are set up to allow for maximum independence.
7. There are ample materials to allow several hours non-repetitive programming.
8. Materials and furniture are age-appropriate.
9. Materials, schedules and communication systems are easily accessible to students.
10. Partitions, dividers and carrels are available as needed.

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South Central TEACCH Region

ELEMENTS OF A TEACCH STRUCTURED TEACHING MODEL CLASSROOM

2. Clear, Efficient Classroom Schedule/Work Systems in Place

Date Achieved:

Goal:

1. Teaching staff have worked out a system of collaboration which, among other things, specifies responsibilities, actions in the face of crisis and an effective system of staff communication.
2. An overall weekly schedule designating, on a daily basis, staff and student assignments, locations and activities, is prominently displayed and being followed.
3. An IEP and written teacher work plan are in place in case a substitute teacher is in the classroom.
4. Each student has a daily schedule which is adjusted to his/her level in terms of type and length and which is used throughout the day.
5. Individualised, visually-based work system in place for each student.
6. Work systems are arranged left-to-right or top-to-bottom and tell what work, how much work, when the student is finished and what comes next.
7. Daily planning time for teacher and assistant is scheduled and being used.
8. Teacher/teaching assistant relationships are obviously collaborative and cooperative.
9. Teachers and assistants are part of a regularly meeting, ongoing teacher support group.
10. Source and system of securing substitutes has been worked out with principal.
11. System for classroom management on approved training days has been worked out with principal and communicated to parents.
12. An informal consultation contract is in place.

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ELEMENTS OF A TEACCH STRUCTURED TEACHING MODEL CLASSROOM

3. Individualised, Functional Communication Systems in Place

Date Achieved:

Goal:

1. Teachers are trained in the use of the TEACCH method of assessing spontaneous communication.
2. Each student has a comprehensive, meaningful current assessment of receptive and expressive language skills in place.
3. Each student has in place functional system(s) of communication for both receptive and expressive skills.
4. Each communication system has a method for data-keeping which allows clear determination of its effectiveness.
5. Each communication system is used throughout the day in authentic, meaningful ways.
6. Each communication system is designed so that it is portable and can be used in settings other than the one in which it is taught.
7. Each communication system includes plans for streamlining and increasing its efficiency, portability, expansion, etc. over time.

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ELEMENTS OF A TEACCH STRUCTURED TEACHING MODEL CLASSROOM

4. IEP Goals Functional, Specific to Assessed Needs and Independence-Oriented

Date Achieved:

Goal:

1. Each student has a recent, meaningful assessment of skills in place, including parental input regarding what is to be taught.

2. Each IEP goal is related to that assessment.

3. Each classroom activity (objective) is clearly related to an IEP goal.

4. Each IEP goal and objective is understood and geared toward independence.

5. Each IEP goal and objective are functional and geared toward independence.

6. Each IEP goal has a data-keeping system which allows clear assessment of progress.

7. IEP goals and objectives are reviewed on a regular basis to monitor progress

8. Expectations of independence for each IEP objective are understood and planned for (i.e., tasks use visual clarity, visual organisation and visual instruction).

9. Necessity of and procedures for the generalisation of each IEP objective to other settings is understood and planned for.

10. An end-of-the-year meeting is planned with the parents to review progress as a first step in developing next year's IEP.

11. Parents are given a written report at the end of the school year summarising progress and setting out goals for the next year.

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ELEMENTS OF A TEACCH STRUCTURED TEACHING MODEL CLASSROOM

5. Structured Approach to Behaviour Management Used

Date Achieved:

Goal:

1. Each student has in place the level and type of structure needed to maintain consistently positive behaviour (e.g., work systems, systems of communication, use of strengths and interests).
2. Teaching staff are knowledgeable re TEACCH behavioural guidelines and those of their school system and use the Problem-Solving Approach in addressing behaviours, including a system for documenting behaviour problems from the moment of their appearance.
3. Restrictive behaviour programs have been preceded by thorough, well-documented, unsuccessful efforts at management through more benign means.
4. Restrictive behaviour programs are written according to TEACCH guidelines including a primary, positive teaching plan; an effective, meaningful data-keeping system; and signed consent by parents and required professionals.
5. Behavioural goals are clear, measurable and reasonable given the handicap and functioning levels of the student.
6. Data on each program is being recorded both accurately and consistently summarised on at least a weekly basis.
7. All behaviour programs include system of review with parents/professionals at least quarterly.
8. All behaviour programs are justifiable.
9. Behaviour programs that produce no change are terminated, altered, or their continuation without change justified within a short period of time after starting or after the most recent change.
10. Plan for consultant involvement re behaviour programs and behaviour management in place.

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ELEMENTS OF A TEACCH STRUCTURED TEACHING MODEL CLASSROOM

6. Plan for Parent Involvement in Place

Date Achieved:

Goal:

1. Each student has been contacted individually regarding programming for their child and how they would like to be involved in classroom activities.
2. A system of communication has been devised for each family which will keep them informed as to their child's progress and what is happening in the classroom.
3. A working plan is in place for each parent who is able to work in the classroom.
4. Each parent feels a sense of trust and spirit of collaboration on a level consistent with their own strengths and weaknesses.
5. Attitudes toward all parents are non-judgmental and devoid of blaming.
6. Key parents have been identified in terms of organisational skills, leadership abilities, classroom support.
7. An active, regularly meeting parents' group is in place where feasible.
8. Classroom parents are active in school affairs such as PTA, fund-raising, etc. and have good working relationship with principal.
9. Appropriate relationship with the TEACCH Center and services is supported and encouraged.

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ELEMENTS OF A TEACCH STRUCTURED TEACHING MODEL CLASSROOM

7. Responsibility for Maintenance of the Model Understood

Date Achieved:

Goal:

1. Teacher and assistants have a thorough conceptual understanding of the Structured Teaching Model which is reflected in the way the classroom is run.
2. Teacher and assistants have a constructive, co-operative consultation relationship with their assigned consultant.
3. Teacher and assistants have an understanding of TEACCH principles of normalisation, right to effective treatment, parents as co-therapists, mainstreaming and behaviour management.
4. Teacher and assistants understand importance of keeping themselves updated on techniques and current understanding of autism.
5. Teacher and assistants maintain a respectable scepticism of new fads and "cures" until research has proven them effective.
6. Teachers and assistants see themselves as pivotal in maintaining honest, open lines of communication among parents, TEACCH and school administration.
7. Teachers and assistants understand the consultation goal of independence in applying the Structured Teaching Model in the classroom and accept responsibility for maintaining the model in the absence of the consultant.
8. Teachers and assistants have knowledge of how to use TEACCH consultant and the TEACCH Consultation Agenda during phases II and III.

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APPENDIX THREE

Case Studies

Case Study 1

Appendix 3

While suspecting something was wrong with Ciaran before 14 months old, it was not until then that we received an appointment at Belfast City Hospital. Initially it was suggested that Ciaran was still young in terms of development and that all children develop at their own pace. As Ciaran progressed nearer two years old and was still not talking and paying attention to toys and his surrounding environment, the Consultant appeared concerned that his development was delayed.

In the interim period Ciaran had started walking approximately 3-4 weeks before his second birthday. It was when what would be considered as a time of joy for most parents, our nightmare began. From an undemanding child who slept normally, though it should be said refused proper solid foods, our child who never had an interest in crawling or creeping began to walk around the home ripping wallpaper and eating and digesting it. He also started to crawl around the floor eating inedible substances like small stones etc... which one would have carried in on their shoes. Eventually within the year he ate his way through most of the living room suite. In the garden it was impossible to let him go out unsupervised as he ate soil and dirt, a behaviour which still continues to this day (though thankfully he is no longer partial to the wallpaper and the furniture). We also noticed that he enjoyed spinning round and round and only paid attention to articles that spun or to bright flickering lights.

Along with these other behaviours the most concerning to us was the head-banging and self-biting and constant crying and screaming. Furthermore his sleeping pattern

became almost unbearable as he only slept approximately two - three hours every day.

We eventually placed him in a private nursery in September 1993 (Ciaran had only turned two at the beginning of August 1993). He never played with toys there or showed any interest in other children and at home he never showed any interest in his two older brothers who at this stage were aged 4 and 6. He seemed to loath them being anywhere near him and used to start biting and slapping himself etc... We had convinced ourselves by this stage that Ciaran was deaf and that these behaviours were due to the fact that he could not hear, as he never responded to his name. The nursery asked permission if they could arrange to have Ciaran seen by a peripatetic teacher for deaf children. She was convinced he was deaf. She referred him to the Malone Clinic who also agreed the child was deaf. At the same time we had arranged to see a Consultant ENT surgeon in the Mater Hospital. At his consultation room in his home, Ciaran was fascinated with picking at the loose papers of books and eating them as well as flicking his fingers in front of his eyes, while the Consultant was clattering tuning forks and tins. All the time Ciaran never paid him any attention or turned round to him. He decided that we insert vents into our child's ears and if there appeared to be no improvement he suggested damage may have occurred to the inner ear drums. The Consultant too appeared at this stage to be convinced the child was deaf. Shortly after the operation our own GP had made an appointment for us along with Ciaran to see a Consultant ENT surgeon in the Royal Hospital privately. At this clinic after a number of tests were carried out, it was suggested that we have the brain-stem test carried out there and then. After the tests were carried out and Ciaran was still sedated, the Consultant

brought us into his office and informed us that he did not know whether he was going to break good news or bad news. He informed us irrespective of the vents that had been inserted the month, earlier Ciaran "could hear the grass grow and that he was not deaf". He said that we were looking at another problem outside of his remit. He wrote to arrange an appointment with a Child Development Officer.

At the time we were devastated and in the dark as to what was wrong with Ciaran. Eventually the appointment with the Child Development Officer came through in mid May 1994. After spending approximately two hours with us, asking us detailed questions and attempting to test Ciaran's ability generally, she said that the child had severe learning difficulties, a term that I had never heard of before and Autistic traits. The Child Development Officer said she would review Ciaran in approximately three months time. In September, she saw Ciaran and us again and spent two hours with us. It was here she informed us that what we were no longer talking about Autistic traits but about Autism and Mental Handicap. It was here that the whole episode began to sink in (the only way I could describe this is that we both felt we had suffered a bereavement and the child we had hoped for had died and we had been given a completely new one).

By this stage we had been successful in obtaining a place in a school for children with Special Educational Needs. Ciaran's behaviour had at this stage worsened in that addition to the above he had now started to smear excreta all over the place including his brothers at bedtime. For this latter behaviour we contacted the Child Development Officer (as we had no support) and she gave us a few rather simple suggestions and after applying these, we were successful in eradicating this

behaviour. Meanwhile at school Ciaran's nursery teacher and the classroom assistants were very concerned with his behaviour and in particular his repetitive self-injury. He did not seek interaction with his peers and was totally disinterested with learning, and was only concerned with lying on the floor finger-flicking over his eyes at lights in the classroom, spinning, running up and down and arm flapping at that stage with his right hand. The school suggested that they contact a Clinical Psychologist who intermittently visited the school.

During the Statementing process the school, and in particular the nursery teacher, and the Principal (who has input into the Statementing process) agreed that to improve Ciaran's overall abilities and to reduce the self-injury, he should be moved to the TEACCH class in the school. Even the Educational Psychologist who saw him at the school agreed that this was the best place for our son, despite the Draft Statement not (a) mentioning his Autism or (b) recommending the TEACCH programme. However, at the end of March 1995, Ciaran was moved to the TEACCH class. As part of the Educational Psychologist's overall assessment, Ciaran was tested using the CARS (Child Autistic Rating Scale) and was found to be bordering on the moderate to severe degree of Autism. The Education and Library Board had no hesitation in agreeing with us that "Autism" be entered on his formal Statement and that his inclusion in the TEACCH programme be entered on to his Statement of Special Educational Needs. For us we were overjoyed that both have been incorporated on to his Statement. More importantly we are totally indebted to the school for moving him to the TEACCH class.

So what has TEACCH meant for us? It must be remembered that when his first PEP - R was carried out there were many areas in which he had little or no skills despite all our pitiless efforts in the home. For example, Ciaran did not have the ability to slot pieces into a form-board. However, within a matter of a few weeks he was able to do this (for us a major progression). Other examples are placing plastic balls into a cylindrical container, placing small cubes into an ice-cube tray. There are many other skills (no matter how small) that have emerged. Within a few months he was able to grasp the routine of going to his work basket, then to his work station, completing his task (working from left to right) and when finishing his task placing his basket to the left on the floor (something by the way he taught his father, as I thought that he set it to his left on the table and only discovered to my cost through a bit of a struggle in which Ciaran won and after confirmation with his teacher, that he was right and I was wrong!!!). The TEACCH teacher and classroom assistants discovered that to spur him on to complete tasks, food was the answer, so every time he completes a work session he gets a "reward". It should be mentioned that Ciaran is a non-verbal child so he has great difficulty in communication and this is one of the major areas that the programme is working with. Even here, there has been major progression. For example, as mentioned before Ciaran is obsessed by eating and while prior to his entry into TEACCH he self-abused himself to obtain food or drink, he has over the last number of months (June 1995) commenced to take us by the hand to his favourite food cupboard in the home to get food or drink. Similarly, over the past few weeks he has started to do the same with his two elder brothers. where as before he never paid them any attention.

Ciaran has no desire or understanding in playing with toys but he now enjoys rough and tumble with dad. Any attempts prior to about six weeks ago, by his brothers to engage in this activity with him would have results in him having a head-banging sessions. However, he now allows them to approach him to jump on him and play with him in this fashion. It appears the structured environment of the classroom is enabling Ciaran to build up tolerance levels as he has to wait and do different things before he is allowed to engage in an activity which he enjoys, such as continually twirling pieces of string or spinning objects or having a snack.

Despite only being in the TEACCH class since the middle of March 1995, he is much more easily manageable to take to the shopping centres, whereas this activity (as a family) would have been impossible beforehand. At last he is no longer near knocking himself into oblivion. With regard to working with Ciaran at home the school have given us a few items of equipment which we can work with.

Finally, we as parents hope that our own child, like many others, will progress through the use of TEACCH and can lead as independently a life as possible.

Case Study 2

Appendix 3

David is 9 years of age and has a severe learning disability and a diagnosis of Autism and associated asthma. He lives at home with his mother and attends a local school for people with severe learning disabilities. He is currently attending a structured class with other children with Autism and participates in the TEACCH programme.

David's mother believed originally that David had a specific hearing impairment but this was excluded as a primary diagnosis following audiometric testing. David's mother was aware of some developmental delay but was unable to draw any specific conclusion or comparison with other children since David was her only child. By the age of 3 his local physician referred him for a specific test to assess his level of intellectual development. A diagnosis of severe learning disability and Autism was then conferred by his paediatrician and his mother was advised that he would need to attend a special school.

His mother felt particularly unsupported at this time of David's life and was not offered any specific form of guidance in respect of David's day to day management or in respect of his prognosis. She described this particular phase of her life as being one characterised as "being left alone - having to take things in my stride".

Between his fourth and seventh year David was described as having major temper tantrums, being uncontrollable in certain public situations and generally disruptive and difficult to manage at home and at school. He experienced specific difficulties with communication and was only able to understand specific words and failed to

with communication and was only able to understand specific words and failed to comprehend any form of complex sentence construction. From time to time he would throw objects around the house and occasionally attempt to bite his mother. David was obsessed with water and would constantly turn on all taps in the house. Any attempts to distract him from this activity would result in shouting, yelling and temper tantrums. His mother feared for his safety when out in public situations and reported that he required very close observation at all times to maintain his safety (one specific difficulty related to his tendency to run into busy roads and to stand in the centre amidst fast moving traffic smiling and laughing out loud). David's mother found this particular behaviour to be exasperating and frightening and believed that David deliberately engaged in such activities as part of "a game". He also had difficulties relating to other friends and particularly young children where he would demonstrate anti-social behaviour and "rough play". On the positive side he was most affectionate with his mother and would always seek opportunities for one to one "interaction and affectionate cuddles".

David also exhibited particular problems in respect of his sleep pattern. In fact between 1992 and 1994 David increasingly settled at school with a regular routine including engagement in music therapy and participation in general aspects of the special needs curriculum. At this time it was reported that David had developed good self-help skills. It was also reported that he was making steady progress in respect of his interaction with his peers and teachers.

David commenced the TEACCH programme in 1993 and has continued on the programme to date. By 1994 his school report provided evidence he had made good progress with the help and structure of the TEACCH method, improving his

work skills, his behaviour and time management and enhancement of communication skills. A summary of results relating to David's progress to date are appended to this case study.

David's mother has also noted major improvements in the quality of life experienced by her son and herself. His mother has adopted TEACCH in the home and has found the use of visual cards and programme management techniques to be of particular benefit in assisting her to construct a purposeful environment for David. David's sleep pattern has now settled and rather than interrupting his mother on many occasions during the night he is now reported to sleep soundly from 9.00 pm each evening. The implementation of structured routines has also enhanced the overall quality of daily life for David and his mother at home and David appears to have mastered the structured teaching approach demanded by TEACCH. For example David has attempted to turn the use of visual cards to his own advantage and has been known to regularly change his menu card at tea time to meet one of his own specific demands for favourite food! Mother has reported that this has resulted in the introduction of humour within the family and this represents a further example of David's new-found tolerance and discriminatory achievement in selecting items of his choice thereby positively reinforcing his appropriate behaviour change.

David has also demonstrated a major change in welcoming and tolerating guests in the house. He assists his mother in a number of household tasks and accomplishes proficiently e.g. helping to make beds, lay tables and to wash up, etc.

David is now engaging in regular external socialisation events and enjoys using public transport and private transport facilities. He now enjoys bus and car trips and does attempt to compromise his safety in public. It is perhaps in the area of calculating risk taking that mother feels there have been the greatest improvements and he is now demonstrating skills of discretion and social competence.

The quality of life for David, his mother and for people with whom he interacts has changed considerably since the implementation of TEACCH. David has not only improved greatly in respect of his intellectual development but his behavioural and associated difficulties have greatly reduced. David has also demonstrated a rapid increase in intellectual capacity in recent months. His mother and teacher have also commented on his adept mastery of the TEACCH communication system and although he remains unable to communicate verbally he is able to express his needs through the use of the TEACCH communication system. In summary his mother has reported that "TEACCH has really changed our lives - it has been so good for the both of us to have been able to understand each other and as such our lives have been enriched".

DAVID
OBSERVATIONS
PRE TEACCH AND AFTER 2 YEAR' TEACCH PROGRAMME

FEATURES OF DAVID'S AUTISM	PRE TEACCH	AFTER 2 YEARS
TRIAD Communication	Temper tantrums -helped himself Did not relate to people	Receptive - understands and follows symbol timetable (whole day and weekly) Sight reads approx 10 words Expressive - uses communication cards on belt (needs and help request) Rings bell for attention Blows whistle to indicate finish
Socialisation	Related to mum. Totally dominated and dictated their life together. Generally ignored other people	Has sense of belonging Recognises all in class Shares little jokes
Imagination	Very rigid behaviours. Water fixation Lined up cars - sameness vital in his world	More flexible, with a wider range of interests
ASSOCIATED FEATURES Sensory interpretation	Body overheated - stripped off clothes - anywhere. Fear - noise and dogs Run away, hit out or self abuse	Remains dressed Has overcome fear of dogs Copes with noise by covering ears
Sleeping	Turned day into night - tired and cross at school - often fell asleep	Successfully uses schedule to go to bed Stays in bed, sleeps most nights
Eating and drinking	Very restricted diet. Lunch - only ate filling of sandwiches - cheese Very sweet tooth	Uses menu schedule, which limits over use of foods Greater variety Eats some school dinner daily
Attention	Minimal - excepting particular interests	Works for 30 min periods plus, both in work station and one-to-one work.
Level of activity	Very active and restless Ran everywhere, flapped arms	Settled, moves quietly between activities Walks appropriately
Mood	Solitary, angry, frightened Laugh/giggle inappropriately	Calm, happy, co-operative Smiles / complains appropriately

FEATURES OF DAVID'S AUTISM	PRE TEACCH	AFTER 2 YEARS
ASSOCIATED BEHAVIOUR DISTURBANCES Aggression / self injury	Pushed people - known and strangers Hit, nipped, stamped on peoples' feet Bit own arm and hand	No outward aggression It forced to comply against his will will stamp his feet and bite own hand
DAVID'S LEARNING Cognitive Skills	Slow, at his pace and involving his interests	Learning has greatly improved Huge improvements in all areas
Self - care skills	Good. Did not request help therefore always independent	Good. Once shown a routine he follows it rigorously
Leisure Skills	Repetitively pursued own interests - cars / water	Plays table games, jigsaws, roller skates, ice skates, cycles and almost swims

TEACCH has helped David to make sense of the world. He is a much happier boy.

Case Study 3

Appendix 3

Peter is 21 years of age and has a learning disability and autism. He lives at home with his parents and sister. Peter has been using TEACCH for the past two years.

Prior to Peter commencing the TEACCH programme he had spent six months at home without any service input, other than intermittent attendance for day-care in a local residential facility.

Unit November 1992, Peter had been attending a school for children with learning disabilities, but due to his disruptive and aggressive behaviour, coupled with his physical size, he was found to be difficult to manage. On the occasions when Peter displayed these traits, staff felt they had no option but to send him home as others were being placed at risk. By November 1992, Peter was being sent home from school on a more frequent basis and eventually ceased to attend from January 1993. He had attended the Behaviour Department in a local hospital on a daily sessional basis. However, Peter's mother felt that as he was not benefiting from the service and as he was unhappy about travelling, his attendance ceased.

Following the break-down of his day care placement at a residential facility, a Care Management Package was designed. After a Care Management Meeting in October 1993, involving a range of personnel, the TEACCH therapist was approached and asked to work with Peter in a new day care setting. Background information was gathered and it was noted that Peter had a history of disruptive and aggressive

behaviour and obsessional traits (such as breaking twigs, picking at and tearing things, going to the toilet frequently, and the manipulation of light switches).

A behavioural programme commenced on 8th November 1993 and was run for an initial six week period following which it was reviewed. During that time a routine was established with Peter, collecting him from home, taking him to a local park for a walk, then on to a local Resource Centre where he would engage in table-top activities in a designated room.

On 2nd December 1993 the TEACCH Programme was implemented - this was initially introduced by Consultant Clinical Psychologist. The programme ran for three hours per day and this was gradually extended as the team built up more activities/work for Peter, until reaching its' present five hours per day duration.

At the beginning Peter displayed all of his obsessional traits which interfered with any routine that the team tried to establish with him. These were incorporated into the programme as a reward for carrying out tasks, eg breaking up a lollipop stick after completing a set amount of tasks; the team also identified set times within his daily schedule when he would go to the toilet, with the aim of trying to cut down on the number of times he requested to go throughout the day.

In the early days of the programme Peter displayed a considerable amount of physical aggression towards staff members, as well as self-abusive behaviour such as hitting himself on the head and chest, and banging his elbows off the table and sides of the chair on which he was sitting. The physical aggression manifested itself

in punching staff on the arms and chest, kicking out underneath the table when staff were working with him on a one-to-one basis introducing new activities, and on very rare occasions, attempting to head-butt.

After the initial six weeks, a Review was conducted. It was generally felt that the programme had proved to be a positive step in that Peter was beginning to settle into a routine. His parents also reported that his level of aggression at home had decreased and his sleep pattern had improved - previously he would not settle to sleep until late at night, and was prone to wake up throughout the night, thus disturbing the family's sleep.

The programme has continued and has evolved throughout recent months and has been extended to incorporate more activities/work for longer periods of time.

During this time, Peter has become more positive and independent in the tasks which have been devised for him within the TEACCH Programme. The incidents of aggressive/disruptive behaviour have decreased throughout the months, at first gradually and then more dramatically within the last six months (See Figure 1). This could be attributed to a number of factors such as Peter becoming more familiar with staff, and staff with him; he is working more independently and therefore there has been less one to one interaction in introducing new tasks, or in getting Peter to follow his routine. This can be attributed to the TEACCH Programme - people with Autism may have language and communication problems. The visual structure of the programme, through the use of matching symbols and/or colour in daily schedules and work systems, allows people such as Peter to make sense of what

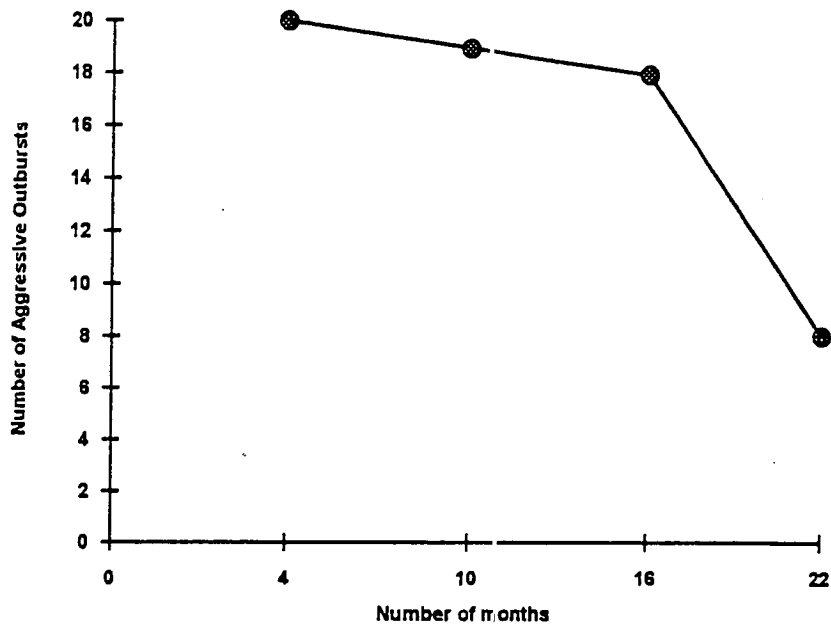
they are expected to do at any given time throughout the day, so with this type of predictable routine, Peter appears to feel comfortable and this helps to improve his self-confidence.

Peter's mother feels that this improvement has transferred itself to the family home, in that he is less disruptive and aggressive and generally more content, his sleep pattern has improved in that he will now settle to sleep earlier and sleep throughout the night. Peter's mother also feels that his speech, concentration and general awareness of what is going on around him have improved.

During the periods when Peter was being sent home from school, and also during those months he remained at home, his mother stated she felt like "a prisoner" in her own home, but since he has been on the TEACCH Programme, a lot of pressure has been lifted off the family, and she herself has had time throughout the day to lead a more independent life.

I feel it would be fair to say that since the inception of the TEACCH Programme, there has been a marked improvement in the quality of life for both Peter and his family, which has in turn, led to a less disruptive and stressful situation, allowing Peter to be maintained at home much more easily than he had been previously.

Fig. 1



Although there is a slight reduction in aggressive incidents in the first 16 months, it is important to note that these incidents have also reduced in terms of intensity and duration.

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Footnotes

Chapter 1

- 1 Assisted informally by three professional staff - a teacher, a speech and language therapist and a consultant clinical psychologist.

Chapter 2

- 2 Structured classrooms are designed to provide children with individualised programmes that emphasise skills appropriate to the children's age and developmental level within the context of a structured learning environment that is free from unnecessary distractible stimuli. Each child has an individual work station, daily schedule and work system. Teaching methods rely upon the use of visual methods to reduce single reliance upon verbal communication that can often be confusing for people with Autism. There is an emphasis on communication, socialisation, practical skills and a fostering of independence. Classes usually serve no more than six pupils and have a minimum of two staff in attendance. Opportunities for integration for specific activities with the main school are also provided.
- 3 The PEP assessment was developed by Division TEACCH for use with children with Autism. A variation - The AAPEP - has been adapted and is used for the assessment of adolescents and adults. The PEP profile is a directly administered test that measures student achievement on a range of behavioural and developmental subscales - **Behavioural** - relating and affect, play and interest in materials, sensory responses and language and **Developmental** - imitation, perception, fine motor, gross motor, eye-hand integration, cognitive-performance and cognitive-verbal. Subscale scores are totalled and a developmental score/age is calculated. The scales have been tested for both reliability and validity (Schopler et al, 1979; Mesibov, 1988) and provide an effective method for the objective measurement of behavioural and social/emotional gain for pupils/students.
- 4 PAPA assumed responsibility for the administration of the questionnaires. Follow up letters were sent to all identified respondents with the aim of maximising the response rate.
- 5 It may be of interest to note that similar difficulties have been reported from North Carolina in respect of the use of control groups (Schopler et al 1982 p.266).

Chapter 3

- 6 All four SLD schools in the South and East Education and Library Board were included in the study. Each had implemented TEACCH and structured classrooms had been introduced in three of the schools. A fifth school, in another Education/Library Board area was included as a 'control'.
- 7 Thus representing the international sex ratio of incidence for Autism.
- 8 Age is reported in years.
- 9 Production of annual statements of medical and educational needs/achievements are requirements legislated in accordance with the 1986 (N.I.) Education Order.
- 10 One of the acclaimed advantages of the TEACCH method is that it makes provision for individualised assessments which aim to identify the specific physical boundaries and support systems that each child needs. Thus some children will require more or less physical structure/routines than others and classroom settings and teaching methods are adapted accordingly.
- 11 Score points are directly related to the actual number of test items passed.
- 12 It should be noted that these children also had additional related to medical conditions such as epilepsy.
- 13 It should be noted that the child in School 4 was placed in a behavioural unit within the school.
- 14 Comparison of C.A.R.S. scores for the more intellectually impaired children in structured and integrated classroom settings suggests that the children in the structured classrooms were more severely Autistic (scoring an average of 32% above the scores obtained by their peers in integrated classrooms on the 'severity of Autism' scale.

Chapter 4

- 15 Respondents did not differentiate between their work with children and adults. In approximately 50% of cases it may be assumed that respondents worked with both children and adults with Autism during the course of their everyday work e.g. social workers, community learning disability nurses etc.
- 16 It should be noted that the children included in the sample presented with a range of complex and varied intellectual and behavioural needs. The extent to which respondents considered that TEACCH had been 'effective' must therefore be judged in accordance with the individual presentational needs of the children with whom they had been working.

Chapter 5

- 17 The other member of the TEACCH Project Group - the Senior Day Care Worker (who was also a qualified behavioural scientist)- also returned a detailed response. His views will be reflected in Chapter 8 when consideration is given to the results relating to the adult cohort group.
- 18 Six respondents also reported upon the desirability of inaugurating a diagnostic service for Autism and related disorders in Northern Ireland as being of primary importance (Localised diagnostic assessment services are developing e.g. in Health & Social Services Trusts in Foyle (L'Derry) and in Down and Lisburn).

Chapter 6

- 19 The TEACCH Team have confirmed that invitations to attend a TEACCH workshop were presented to parents of all of the children and the adults included in the present study.
- 20 Three case studies are included in Appendix Three and provide further evidence of parental/carer perceptions of TEACCH.

Chapter 7

- 21 Four workshops were provided for teachers in Northern Ireland; a further workshop was also provided for teachers from the Republic of Ireland.

Chapter 8

- 22 It should be noted that the views of a number of professional support staff (working with both adults and children) have been reported elsewhere in chapter 4.
- 23 The AAPEP was adapted from the PEP assessment profile (see Chapter 3) by the North Carolina TEACCH Team for specific use with adolescents and adults, (Mesibov et al, 1988).
- 24 The range of behaviour difficulties reported were: self abuse (4 subjects), aggressive outbursts (4 subjects), psychomotor disturbance (4 subjects), stereotypy (3 subjects) and compulsive behaviour (3 subjects).
- 25 It should be noted that it was only possible to obtain pre and post psychometric test results for one subject.
- 26 An 'emerging score' is obtained in respect of skills for which subjects have demonstrated a 'willingness' to learn or can partially perform. Such skills are judged as requiring further learning and consolidation.
- 27 The reduction in 'emerging' scores for three subjects is accounted for by a commensurate increase in the number of converted pre-test 'emerging' scores to 'pass' scores at the post-test assessment.
- 28 It should be noted that the Day Care Service actually advised parents of the intended implementation of TEACCH and of its methodology. Parents 'signed' a general statement of authorisation for their cons/daughters to be included in the TEACCH project at the Day Care Service.

Chapter 9

- 29 It should be noted that TEACCH was available in a limited number of areas in Northern Ireland at the time of the present study.
- 30 The results included in this section represent an amalgamation of results arising from the children and adult carer groups and from project staff and professional support staff responses.
- 31 This may require the employment of an Assistant Psychologist to undertake this work.
- 32 It should be noted that Schopler et al (1982) also reported difficulties in securing comparative results from control groups.

Chapter 10

- 33 Results arising from the present study compare favourably with those reported by Schopler et al (1972) and by Schopler, Mesibov and Baker (1982).