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TRAINING PARENTS OF RETARDED CHILDREN, IN THE USE OF BEHAVIOURAL TECHNIQUES - AN EVALUATION

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Summary

The present study evaluated the utility of the parent-training workshops presently being used by the Family Training Unit, an educational resource branch of the Intellectually Retarded Services.

The evaluation made use of two parent training groups, and the final number of parents involved was fourteen. The parents' ages ranged from early twenties to over fifty; and they had various educational backgrounds. Their children varied in the degree of retardation, and their ages ranged from 3 years to 8 years 6 months.

The workshops, (an average of 10, two hour sessions) concentrated on teaching the parents how to teach their children new skills and thus the parents all worked on individual programmes with their children. While one couple used the information gained from the workshop to deal with a behaviour problem, in the other 7 families the target was skill acquisition.

The evaluation involved both "objective" pre-workshop and post workshop measures of assessment (through the use of home-based video recordings) as well as the parents' subjective opinions of the use of the workshop and their children's improvement. Each parent also filled in a pre and post Parent Attitude inventory to examine any attitude changes.

These measures enabled an individual success rating for each parent and child, as well as an overall group evaluation. Results indicated that the parents all increased their teaching skills to various degrees, and some parents showed an ability to generalise these skills to other teaching situations. Discrepancies between

objective and subjective measures of success illustrated the necessity of multiple measures of assessment, and led to discussion of what aspects of the course were most useful to the parents.

The varying successes of the parents also enabled the determination of possible predictors of success. It seemed that the parent's level of education, degree of motivation and child's degree of retardation affected the parent's ability to learn and use the skills. Practical suggestions to foster success in all parents, regarding course content and structure were made in the light of these findings.

Finally, the methodological problems of this applied research study were discussed, along with an outline of the needed areas of future research.

To the author's knowledge this thesis contains no material which has been accepted for the award of any other degree or diploma in any university and contains no material previously published or written by another person, except when due reference is made in the text of the thesis.

I wish to express my sincere thanks to the staff of the Family Training Unit for their tremendous support, co-operation and assistance throughout all the stages of this study.

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SECTION 1 - INTRODUCTION

Parent training research emerged only 15 years ago (Forehand and Atkeson, 1977) and is quickly developing with the increasing evidence that training parents in the use of behaviour modification is generally successful. Numerous training programs have been developed to deal with a wide variety of problems of both normal and retarded children. As the rationale and technology of teaching behavioural principles is approximately the same regardless of whether the child is normal or retarded, this review will not be confined to articles concerning parents of retarded children.

I. RATIONALE FOR TRAINING PARENTS

Several different lines of reasoning have converged in the development of parent training programs.

Perhaps the greatest impetus for such programs was the realisation that non-professional people and places could be used to deal with mental health problems. Only over the last decade has the principle that mental health problems should only be dealt with in a professional location and in the hands of qualified technicians been exposed as a myth (Tharp & Wetzel, 1969). Parents of retarded children have especially been presented with the view that their child needs "expert" treatment. (Cunningham, 1975). This principle, which maintained the professional prestige of the mental health workers was shown to be inadequate by the persistent findings of the failure of treatment techniques once the person had returned to his ordinary environment.

Learning theorists made explicit the fact that the person's own environment is principally responsible for the maintenance or change of any behaviour (Skinner, 1953). Thus the individual's natural

environment has the greatest potential for therapeutic effects just as the people who have the closest contact with the client have the potential to be the most effective change agents. For children, it is therefore usually the parents who have the greatest potential to be powerful change agents, and by using parents as therapists, the problems of transferring the changes from the clinic to the home will be avoided.

Another impetus for parent training programs is the relative simplicity of behaviour modification principles. These principles are clear and straightforward and avoid the ambiguities and jargon found in the original techniques of psychotherapy (Gardner, 1975). The traditional therapist rarely made practical suggestions, rather gave technical and unspecific comments to parents (Berkowitz & Graziano, 1972), and this prevented anyone but the clinician administering any assistance to the problem at hand, and again preserved professional status and prestige.

The practicality of training parents introduces another positive dimension. The demand for behavioural techniques is quickly outpacing the supply of trained personnel (Johnson, 1971), so training parents in groups seems to offer relief for over burdened clinicians (Rinn, Vernon and Wise, 1975). Also the parents constitute a cheap and continuous treatment resource (Johnson & Katz, 1973) which is especially important with retarded children, where the parents are faced with a continual stream of problems throughout the child's development (Cunningham, 1975).

Finally, in that the parents are likely to control more powerful contingencies than the therapist, they are more likely to become even more efficient managers than professionals ever could. (Doernberg, 1972).

To summarise, the thrusts of operant psychology, deprofessionalization and the utilization of natural relationships provide a good rationale behind the training of parents in behavioural principles.

As Mittler (1974, p.76) concluded:

> "One of the aims of the following decade must be to find means of helping parents to work in partnership with professionals .... Professionalis should share their knowledge and skills with parents, so that parents can use ordinary situations in which to teach their child."

Many parent training programs have developed as a consequence. Most of the programs are in line with Tharp and Wetzel's "triadic" model, which says that the individuals who possess the powerful reinforcers should occupy an intermediate position between the professional consultant and the person who is the target of intervention. (Tharp & Wetzel, 1969).

From this theoretical model an endless list of technological problems arise - What types of behaviours should be dealth with? What should be the content of the program? What is the best approach to training? How is parental involvement maintained? Does the training generalize across settings and behaviours? Is the program durable? These problems have been tackled by various studies on parent training, and the rest of this review will report on findings of the research and the methodological problems faced by the researchers.

CHILD TARGET BEHAVIOURS

Basically the behaviour changes with which the parent training programs deal, can be categorized into two broad classes. (1) the altering of already existing behaviours and (2) the acquisition of new skills.

(1) Modification of existing behaviours

It has been well demonstrated in the literature that behaviour principles can be effectively taught to parents to change problem behaviours of their children. Some of their behaviours which have been changed include self injurious scratching (Allen & Harris, 1966), oppositional behaviour (Zeilberger, 1968), sibling fighting (O'Leary, O'Leary and Becker, 1972) disturbing meal time behaviour (Johnson, 1971) and many everyday problem behaviours (Salzinger et al, 1970).

Specific technologies have been developed to deal with certain problem behaviours. Patterson, Cobb and Ray (1972) devised a social engineering technology to retrain families of aggressive boys, and has looked at the effects of the program on siblings as well as the targets in the family (Arnold, Levine & Patterson, 1975). Bernal (1969) examined the "brat syndrome" and developed a specific technology to deal with the problem.

In his comprehensive review, O'Dell (1974) suggests that there does not seem to be any overt class of behaviour that parents can not be trained to modify, emphasising the diversity of possible behaviour changes.

(2) Skill Acquisition

The research done on teaching new skills is not as wide spread, but it is particularly important with parents of retarded children. There is a marked difference in the application of behavioural principles in dealing with a specific problem in a normal child (and most studies showed the effectiveness of training, by dealing with an easily defined specific behaviour) and the application to problems faced by parents of retarded children. Retarded children need help in the acquisition of a wide range of skills (such as dressing, feeding, language, problem solving, and social interaction) as they explore less and do not learn spontaneously as other children do, through imitation. Retarded

children are not as sensitive to their environment, but at the same time they are more dependent on it. (Barnard, 1968).

Studies so far in this area (acquisition of new skills) using parents as trainers have primarily been reported as case studies. For example Barnard (1968) showed how an 18 month old retarded infant was taught to feed himself, and learned the skills that preceded walking, by teaching the mother fundamental behaviour principles. Wolf, Risley & Mess (1964) shaped a five year old autistic child's verbal behaviour and got him wearing his glasses, by applying operant procedures through attendants and parents.

Cunningham & Jeffries (1971) report of their workshop provides anecdotal evidence of the success of their parent training program. A nine year old multihandicapped boy was taught to dress himself; a 2½ year old mongol was taught to feed himself with a spoon; and a 4½ year old subnormal boy was taught to string his single word utterances together and made phrases.

Studies also have shown parents effectively using behavioural principles in toilet training both retarded and normal children. (Bollard & Woodroffe, 1977; Madsen, 1965; Pumroy & Pumroy, 1965)

Thus evidence exists to support the theoretical postulate that parents can become effective managers of their children, and be taught ways of teaching their children new skills.

II. TECHNOLOGICAL ISSUES

The underlying objective of all the programs is to produce meaningful change in the parents' behaviour, and thereby produce changes in the children's behaviour. This incorporates two major areas of concern.

(1) The initial acquisition of skills, i.e. how do the parents learn the skills?

(2) The durability and generalizability of skills i.e. how well do the skills generalize and are they maintained over time?

The literature examines the technological details involved in both of these issues, but it is clear that the research in this area is deficient.

(1) ACQUISITION OF SKILLS

CONTENT OF PROGRAMS

The content of the programs is obviously crucial if parent training is going to be effective, and the literature indicates a number of different approaches to content, although most stress an understanding of behavioural techniques as the principle objective. Tavormina (1975) found that mothers of mentally retarded children who experienced contingency management training showed greater overall improvement in the parent-child relations, than mothers who participated in group discussions.

The number of topics covered in a program vary widely. Gardner's (1973) review showed that the length of the courses ranged from a minimum of 6 hours to 200 hours.

Some programs have only been concerned with teaching the parents specific behavioural skills, relevant to the problems at hand (e.g. Herbert et al 1973; Barnard 1968; Wolf et al 1964; Hawkins et al 1966, Lavingueur et al 1973). Other programs emphasize the training of general behavioural skills which can be applied to many problems - such as teaching parents to define behaviours, count their frequency and apply consequences which will accelerate or decelerate the frequency (Mira 1970; Bidder et al 1975; Terdall & Buell 1969).

No mention of the theoretical principles is made in either of the above approaches. It seems that the most comprehensive content cover comes from programs where both the theoretical principles and terms of learning theory are taught as well as training in the general applied skills based on these principles, (e.g. Clunies-Ross, 1976; Fishman & Fishman, 1975; Hall et al, 1972; Miller, 1975; Patterson et al, 1972; Salzinger, 1970).

However, as Johnson and Katz (1972) point out, most studies contain inadequate descriptions of what was being done by whom to alter behaviour changes, and this makes it very difficult to say with certainty what was taught, and certainly precludes replication studies.

Cunningham & Jeffree's (1971) program was specifically concerned with teaching parents of retarded children how to teach their children new skills, and provided information regarding child development and determining appropriate expectations in the retarded child, as well as an understanding of operant procedures. The development of new skills as an objective, results in an emphasis of providing parents with the basis principles from which to derive their own teaching situations, rather than just applying "cookbook" recipes to problems (Cunningham 1975).

Thus Cunningham & Jeffree's aim is to have the parents internalize a "model" for approaching the behaviour of their own children. "By internalize we mean that the parent has achieved a skill in applying the principles and concepts such that she need not overtly articulate each step on each occasion, but can "intuitively" react to the child and the learning situation" (Cunningham & Jeffree, 1975 page 5). Their model sees that any teaching situation involves four aspects.

1. Observation and Assessment - to determine a framework of expectancies based on a child development chart.
2. Selection of a task relevant and appropriate for the child and arrangement of the task into small steps.

3. Presentation of a task - this is where the operant procedures are involved (i.e. the use of prompts, rewards, etc.)
4. Evaluation is constantly needed to determine a child's progress in any task.

Thus the information provided in Cunningham's workshops is a comprehensive coverage which teaches the parent to see the child objectively and teaches general techniques for educating the child in the fullest sense possible. The program under evaluation also adopts this approach.

TRAINING APPROACHES

DIRECT

Both individual consultations (Bernal 1969; Goldstein & Lanyon 1971; Johnson 1971; Lae & Lindsay 1968; Wolf, Risby & Mees 1964) which allow for direct personal instruction, and group training (Bidder et al 1975; Cunningham & Jeffree 1971; Fishman & Fishman 1975) which allows for more economical use of professional training and incorporate parent interaction and encouragement, have been used. Some programs have been able to gain the advantages of both approaches by including a phase of individual training within the group setting (Patterson et al 1972; Salzinger et al 1970).

Another novel approach has been training parents in behavioural principles in their own home. (Christopherson et al, 1972). Although this is uneconomical in terms of the professional's time, it does ensure the successful application of the principles by the parents (Cowling 1978).

The existence of books such as Baldwin et al (1973) "Isn't it time he outgrew this?", French et al (1967) "How you can help your retarded child", and Watson, "Behavioural modification of mentally retarded and autistic children: A manual for nurses, parents and teachers" & Beiker (1973) Parents are Teachers" indicates the professional recognition of parental needs for concrete information on child rearing methods.

The evaluation of training methods is still in an early stage of development. There is no conclusive evidence as to which is the most effective technique, although Johnson & Brown (1969) found modelling to be more effective than direct instructions. Patterson et al (1967) suggest the most important training technique is to provide positive reinforcing feedback to the parents as they develop new skills. Gardner (1972) showed that principles could best be taught by lectures, and that behavioural intervention "skills" could best be taught by role playing. Nor is there any evidence as to the superiority of group training over individual training in relation to parents. However Kingsley and Wilson (1977), showed that group behavioural therapy was superior to individual behavioural therapy in the treatment of obesity. They concluded that this superiority of the group treatment may have been due to motivation. Once the subjects had learnt the skills it seemed that group pressure to adhere to the new strategies possibly made the group treatment more powerful than the individual treatment in terms of sustaining commitment and motivation.

Such conclusions may also be relevant to parent training approaches.

INDIRECT

An alternative approach to parent training is the use of parent training packages consist of a combination of printed material, slides, cassettes or films (Stowitcheck & Hofmeister 1975). The packages present useful teaching principles and show the parents how to apply these principles to teach skills, critical to a child's development.

Good packages are constantly field tested and revised on the basis of parents' comments. The main advantage of this approach is that it enables parents to receive training without the presence of a skilled trainer. Parents of children who live in rural areas do not have access to specialised services and packages are bieng specifically developed for these people. (Shearer & Shearer 1969, Stowitscheck & Hofmeister 1975).

MAINTAINING PARENT INTEREST

This issue has been viewed as the most important consideration in carrying out a successful parent training programme (Griffen & Hudsen 1978) and must be dealt with in devising the program. O'Dell (1974) reports the parent attrition rate in some programs has been as high as 70%.

Tharp & Wetzel (1969) point out there are three possible sources of reinforcement for parents, the summation of which must be positive to induce and maintain parent behaviour changes:

1. Reinforcement under control of the consultant.
2. Reinforcement from others surrounding the mediators (i.e. wives and husbands).
3. Reinforcement provided by the target's new behaviours.

Only the first source can be directly controlled. In teaching the parents learning principles, the consultants require control over parent behaviours, just as the parents require control over the targets. Thus the effectiveness of the training is dependent on the conslultant, controlling and modifying the mediator's behaviour. Rose (1969) discusses the importance of remembering to reinforce parent successes. Parent training in the laboratory has enabled investigators to successfully direct behaviour by the use of lights, hand signals, or remote controlled auditory devices. (Bernal et al 1968, Wagner & Ora 1970, Wahler 1967). This cuing may be seen as a reinforcing event as it provides on going feedback to parents, and therefore shapes parent behaviour (Johnson & Brown 1969). Some programs have utilized extrinsic reinforcers such as fee reductions (Mira 1970), rewards (Peine & Munro 1970), or attendance contingent upon completing homework (Patterson et al 1972) to maintain active parent participation.

Yet many of the studies, which stress the use of operant techniques with children, fail to report any systematic attempt to shape the parent's behaviour using the same principles.

However others believe such reinforcers are ~~un~~necessary (Cunningham & Jeffree 1971) as they see the parents expectations of having success the main factor in co-operative parents. One of the most powerful reinforcing events for the parents responses is a desirable change in the target's behaviours (Berberich 1971).

Shearer and Shearer (1972) consider that early parental success, is closely inter-related with the technology in terms of precise objectives, accurate assessement etc. However Eyberg and Johnson (1974) could not find a relationship between the relative ease or difficulty of the problem tackled by parents and parent satisfaction. Further studies are required to evaluate the efficiency of reinforcement provided by the child's target behaviour changes, compared with

reinforcements related to the parent's involvement in training session such as the use of monetary rewards and reinforcements administered by the supervisors, spouses and collegues (Loeber & Wiesman 1975).

PARENT ATTRIBUTES

Parent attributes apart from motivation have been shown to affect the success of a program. Studies which have primarily used learning of behavioural principles have shown that success is positively related to educational level (Salzinger et al 1970; Mira 1970; Cunningham & Jeffree 1971). Patterson et al (1972) suggested that the difficulty in training uneducated, low S.E.S. parents was due to a lack of general child management skills and the low availability of reinforcement. But Ayllon and Roberts (1975) found low class uneducated mothers could be taught the skills as long as they were taught "cookbook recipes" and were taught by modelling. Cunningham and Jeffree (1971) also found that educational background did not correlate with the successful application of the behavioural model they taught. In fact, some of the less educated parents produced the "best" results.

Therefore no definite conclusions regarding education level and likelihood of success can yet be drawn.

Other parent variables are important considerations in implementing a program for parents of retarded children. Many parents, more commonly from higher socio-economic groups will not accept the fact that their child is retarded and thus see training as a waste of time (Michaels & Schueman 1962).

It is likely therefore that the parents' attitudes may affect their approach to parent training groups, and thus it may be profitable to examine less behaviourally oriented work to decide on training methods (Cunningham 1975).

Often feelings of guilt and inadequacy may arise or be enhanced when parents are taught simple educational procedures, which they have not used in the past. The skills must be presented in such a way, that the therapist plays an advisory role, rather than appears as a professional on a pedestal (Yule 1975). A number of programs have thus provided parent opportunities to discuss such issues - i.e. issues which are not related specifically to training procedures (Cunningham & Jeffree 1975; Wilson 1971).

(2) DURABILITY OUTSIDE TRAINING SESSIONS

Reviews of applied behavioural research (O'Dell 1974; Kazden Bootzin 1972) clearly indicate that researchers are primarily concerned with demonstrating that operant procedures can cause change, but are minimally concerned with the ability to provide long-term generalizable behaviour changes. But as pointed out by Bandura (1969) evaluation of psychological treatments should dislinguish among the initial indication of behaviour changes, their generalization to the natural environment and their maintenance over time. Different variables govern each of these processes and generalization and maintenance can be ensured only to the degree that procedures are explicitly designed to accomplish such objectives, and are built into the overall program.

With parent training, generalization and maintenance of skills is crucial, for the goal of such intervention is to induce desirable behaviour which is maintained after the treatment is over. With retarded children, where parents do not have the hope that eventually the child will be normal - generalization and long term maintenance are the most essential issues (Yule 1975).

Cunningham & Jeffree (1971) see the primary goal of parent training is for parents to "internalize" the teaching model, and apply the learning principles to any learning situation. This aim can be seen to have preventative aspects: "Parents who are aware of the nature of the control of their children's behaviour may well be better able to prevent the occurrence of future problems." (Gelfand & Hartman 1968 p.210).

Although the technology has not yet yielded well developed techniques for producing generality and durability (O'Dell 1974) and has been seen as a neglected area of concern (Keeley et al 1976), it seems that increasing interest with the problems of generalization and maintenance is emerging.

GENERALIZATION

Tharp & Wetzel (1969) discuss generalization in the following way - "intervention in one area often has correlated effects in other areas of behaviour" (p.103). Such a broad definition implies that generalization can occur across behaviours, across different settings, and even across persons (e.g. siblings (Arnold et al 1975; Lavigueur et al 1973).

But there is nothing automatic about generalization. Patterson's studies (Patterson, Cobb & Ray 1972 ; Patterson, 1974) - trained parents of aggressive boys and found the training procedures (which included a general set of operant learning principles as well as specific techniques) were not effective in producing lasting generalization effects of management skills to non-targeted behaviours or behaviour of other siblings. These findings indicate that rather than learn general strategies for child management the parents seemed only to focus on their major concerns at the time. Miller & Sloane (1976) found increases in parent prompting and reinforcement generalized only minimally in a setting where training had not occurred.

However studies by Arnold, Levine & Patterson (1975), Ayllon & Roberts (1972), Cunnginham & Jeffree (1973) and Salzinger et al (1970) found evidence that some parents acquired a degree of skill sufficient for independently formulating and carrying out new programs, thus showing a generalization of their knowledge beyond situations specifically taken up in training. The generalization effects however were only recorded as anecdotal incidences of individual cases rather than controlled experimental findings.

Wahler (1969) suggests that generalization across settings does not usually occur unless there is environmental support to maintain it. As Baer et al (1968) pointed out, a given behavioural change may need to be programmed in a number of settings and across a number of behaviours to accomplish wide spread generality. Thus it can be seen that generalization is not a passive process to be expected if a program is successful, but rather programs must include a technology for generalization.

MAINTENANCE

The maintenance of the program is a major issue in parent training, since the entire determination of success or failure of a program depends upon analysis of the family functioning, when the therapists role has ended, rather than demonstrating treatment-induced changes (Atthave 1973; Miller 1975).

The maintenance of the change can be viewed as a special kind of stimulus generalization - i.e. generalization across time (Lovaas et al 1973; Forehand & Atkeson 1977), and thus must be accounted for by the technology.

Suggestions have been made to plan for durable behaviour changes, such as the use of partial reinforcement in the original treatement schedule, the intermittent use of non-contingent reinforcers outside the treatment settings, and over-learning (Koegel & Rincover 1976). Systematic examination of these procedures is lacking in the parent literature (Forehand & Atkeson 1977).

Follow-up observations can be considered as non-contingent reinforcers, as one of the aims of a follow-up is to provide support and encouragement for the parents' continuing ability to effectively control their children's behaviour.

However inadequate control of follow-ups has been a frequent criticism in the literature (Keeley, Shemberg & Carbonell 1976; MacDonough & McNamara 1973; Palwicki 1970). Many studies do not go any further than looking at changes straight after the final treatment setting, and when they do exist, the follow-ups are conducted informally and indirectly either by telephone, letter or group discussion (Barrett 1969; Cunningham & Jeffree 1973; Mathis 1971). Johnson & Katz's review showed that follow-ups range from a period of two weeks (Patterson et al 1967) to three years Levitt 1964) and invariably the follow-ups indicated that behaviour improvements were maintained beyond baseline level with no undesirable after effects. The reliability of these findings is doubtful as rarely were the methods the same observation methods used during the treatment sessions. Also there is the possibility with the use of phone call followup, of the "Hello Goodbye" effect (Hathaway 1948), according to which the persons contacted for information feel it is only polite to assure the therapist that the child has improved, whether or not any change in behaviour is actually observable.

It seems that as with maintaining parent interest during the programs, resistance to extinction and generalization is largely a function of the presence or absence of strong positive reinforcing consequences. However the technology for developing sound techniques for producing generality and durability, is still at the teething stage.

The methodological issues of research in these areas are therefore important in developing this technology, and will be discussed in the following section.

III. METHODOLOGICAL ISSUES IN PARENT TRAINING RESEARCH

As the literature on parent training increases, so does the sophistication of the researchers in evaluating parent training programs, and in establishing their effectiveness.

O'Dell (1974) applies Baer et al (1968)'s criteria for applied behavioural analysis to parent training and yields the following criterion as crucial in any evaluation.

1. Characteristics of parents and children employed in the study should be reported.
2. Basic demographic data.
3. Precise behavioural descriptions emphasising quantitative characteristics, should be provided for the child's target behaviours, the parent behaviours and the experimenter's behaviours producing the parent changes.
4. Technological descriptions and operational definitions of the content of training should be provided to such an extent that the study is replicable.
5. Design of the experiment should provide control and isolation of variables, so that results can be attributed to their manipulation, and results should include stable base lines, and reversals when applicable.

6. Measurement should stress observable behaviours and provide reliability estimates of those measures.
7. Evaluation should emphasise factors producing generality and durability of change.
8. Cost of programs in time and expense should be reported to allow comparison in efficiency.
9. The study should make obvious the importance in a social context of the behaviours changed.

From examining the literature, only a very few studies (Hawkins et al 1966; Patterson & Brodsky 1966; Patterson, Cubb & Ray 1972; and Patterson et al 1967) meet all of these criteria.

The wide variety of methodological techniques that have been used reveal the unrefined condition of the technology at present. The following sections provide a critical analysis of some of these techniques.

(1) EXPERIMENTAL DESIGN

A handful of different experimental designs have been used, all with the common aim of demonstrating certain events can be responsible for the occurrence of non-occurrence of certain behaviours.

Most of the early studies have been case reports, constituting narrative accounts of the treatment programs with neither quantifiable results, nor experimental control to demonstrate causal relationships, e.g. Tharp & Wetzel 1969; Holland 1969; Madsen 1965; Mira 1970).

To show that a behavioural change is causally connected to the treatment procedure, three experimental designs have been developed,

1. the reversal technique,
2. the multiple baseline technique, and
3. the use of comparison groups.

Reversal studies have been effective in showing that treatment operations exerted functional control over the target's behaviour

(Wahler 1969). This design has been criticised as being self defeating (Baer, Wold & Risley 1969), in that the behaviour being produced is typically a valuable behaviour, and one that is therefore reinforced outside the experimental setting. Thus the number of reversals possible is limited by the nature of the social setting in which the behaviour takes place, (i.e. some behaviours are not reversible as environmental variables maintain the change). Thus commitment to a reversal design forces the experimenter to look at behaviour change procedures which are of short lived effectiveness. Five years ago it was dramatic to show relations among variables using reversal designs. However now the emphasis is on demonstrating that the procedures are long lasting and can be implemented practically, (O'Leary & Kent 1973).

One other common weakness of a reversal design is the fact that even the temporary removal of a treatment procedure may be undesirable (e.g. self injurious behaviour, fire setting).

An alternative to the reversal design is the multiple baseline design (Baer, Wolf & Risley 1968), used when behaviour is irreversible or when reversing the behaviour is undesirable.

This method of systematically applying the treatment procedure across a number of behaviours, settings or people implies that therapeutic changes in behaviour need not be interrupted or reversed in order to demonstrate causality.

However multiple baseline designs suffer from the limitations that only one target behaviour at a time can be treated with a single individual (Mann 1976). Thus other target behaviours must continue for a period of time without treatment. Nevertheless parent training studies have made use of this type of design. (Hall, Christler, Cranton & Tucker 1970; Ayllon & Roberts 1972).

A third type of design, the use of comparison groups, has also been used to demonstrate the causal connection between behaviour changes and treatment programs. Wiltz & Patterson (1974) found favourable changes in the parents and children involved in the Oregon Research Institute Package, when compared to an untreated waiting list control over a five week period. Walter and Gilmore (1973), compared the same package with a placebo treatment (to control further effects of contact with expert helpers) and found similar significant differences.

Palwicki (1970) and MacDonough & McNamara (1973) both reviewed behaviour therapy research done with children and are critical of the researchers lack of control over a number of important design criteria. Palwicki (1970) specifies five design variables that should be used:- control group, baseline, systematic variation of treatment, unbiased observer and follow-up - and finds most of the studies published between 1965-1969 inadequate.

McDonough and McNamara (1973) point out that the design of the experiment determines the appropriate criteria, and therefore are critical or Palwicki's review. For example a control group is not necessary for evaluating intrasubject design, and for group designs of the non factorial type systematic variation of the treatment is not necessary. However even when these design-criteria relationships are considered; McDonough & McNamara (1973) find poor control for a number of criteria - the criteria of unbiased observers and follow-up has on the average been controlled in only 46% of the studies.

If the scientific merit of research in parent training is to be accepted, tight controls of experimental design criteria are needed.

(2) MEASUREMENT TECHNIQUES

Various methods of measuring the effects of the treatment can be seen in the literature, ranging from vague global reports (Tharp & Wetzel 1969); Mira 1970) to the systematic collection of objective records by independent observors (Johnson & Brown 1969; Wagner & Ova 1970; Wahler 1969).

There is a growing body of data demonstrating the general unreliability of parent reports (Haggard, Brenstad & Skait, 1960; Schnelle 1974) and suggestions as to why this is so. Patterson (1969) points out the parents' desire to please the therapist may clearly affect reports. However, it is still important that the parents' perceptions of the improvements are reported - although it seems crucial not to place total reliance upon the parents' evaluation, as the true indicators of the success of the program.

The use of parents as objective observers has not proved very successful, most data indicating that parents are very poor recorders especially when recording their own behaviour. (Allen & Harris 1971; Herbert& Baer 1972; Patterson 1971).

However the use of independent observors can lead to methodological problems which can be categorised into three major areas.

1. The observation process itself may result in reactivity. This question needs much more research before any conclusions can be made. The finding of reactive effects seems to depend upon the subjects, what variables are to be analysed, the personal attributes of the observer, and the rationale for observation. (Johnson & Balstad 1975). One solution to observer interference commonly used in parent-child interaction is 'partial concealment'. The investigator does not conceal the fact that he is making observations, but does conceal what is being observed. For example, the investogator implies the child is being observed when

in fact the mother's behaviour is being observed (Weick 1968).

2. The second possible problem is that of observer bias. Rosenthal (1963) in his classic article, presented evidence that the knowledge of the hypothesies could serve as an unintended source of variance in experimental results. Kass & O'Leary (1970) showed the presence of observer bias, when observers had different expectations about the behaviour of two disruptive children. The obvious method of minimising this problem is providing observers with as little information as possible.
3. Procedural problems in observation make up the third type of problem. These include the problems in measuring reliability of observations (observer agreements), instrument decay (i.e. estimates of observer accuracy obtained one week may not be representative of observer accuracy the next week), and the reactive effects of being assessed as an observer (Romanizyk et al 1973).

One of the main ways in which the procedural problems of observation have been overcome is by the use of behavioural codes, where the behaviours of particular interest are isolated and operationally defined, e.g. Patterson's Family Interaction Code (Patterson & Cobb 1971). Many studies have adopted such techniques (Eyberg & Johnson 1974; Gladstone & Sherman 1975; Herbert & Baer 1972; Parsonson, Baer & Baer 1974; Wahler 1969) with a high reliability between independent observers. Both parent behaviours and child behaviour changes have been operationally defined, the child behaviour changes seen as an indirect indicator of trainer effectiveness. (Koegel, Risso & Rincover 1977).

Wahler et al (1969a) simultaneously recorded the child's frequencies of desirable and undesirable behaviour, as well as the parent's attention to each of these behaviours, demonstrating how parent attention can be an important determinent of which type of behaviour the child exhibits.

However not all of the studies have used behavioural coding systems as measuring instruments to determine the effectiveness of the programs. Written measures of the parents knowledge of behaviour modification principles have been used (Peine 1971; Pumroy & Pumroy 1965; Salzinger et al 1970). Some studies rely on written and verbal reports on such things as anxiety measures, parent attitudes to child behaviour changes and attitudes to the process and outcome of treatment. (Bidder, Byrant & Grey 1975; Fishman & Fishman 1975).

Applied behaviour therapy with children as a field has been characterised by outcome studies (Patterson, Cobb & Ray 1973; Patterson & Reid 1973). Eyberg and Johnson (1974) found discrepencies in outcome when they used a multiple of assessment measures. A high degree of success was measured by the parent-collected observational data, parent attitude change toward their children and toward program outcomes, yet only a moderate degree of success was evidenced by behavioural data taken by observers in the house. This discrepency has three possible explanations: the child behaviours did not change dramatically, rather the parents became more tolerant; the home observation process suffered from reactivity - the parents and children may have tried to present a socially desirable picture of themselves; or the home observation procedure did not deal directly with the problems treated.

Eyberg & Johnson (1974) conclude that multiple measurements seem crucial, as their convergence tends to allow greater confience in making conclusions as to the effect of the treatment.

Although not focusing on group training, Kent & O'Leary's (1976) evaluation of behaviour modification training with parents and teachers of conduct problem children also made use of multiple measures (academic achievement, direct observation, ratings by teacher and parent). They concluded that the measures provided some converging

evidence of the positive effects obtained.

Terdal, Jackson & Gardner (1974) also found discrepancies between maternal reports and observed behaviour when looking at the interactions of mothers of both normal and retarded children. They consider it necessary to treat all measures whether by trained coder or mother as valid in their own right. It would be foolish to assume that the observed behaviour is "right" and any other deviation is "wrong", considering the possible reactivity of the observation process.

Further the need for meaningful measures of parent and child behaviour change in the broader sense of attitudinal and interactional variables has been stated by Berkowitz and Graziano (1972). Studies so far have concentrated on increases or decreases in target behaviours as the sole criterion of an effective program. But the parents of retarded children have needs which extend beyond that of causing a specific behaviour change (Cunningham 1975). The concept of retardation is a confusing one for most parents. They are generally unsure how to translate what they are told into reasonable expectations for their children, and are therefore unsure of how much they can do to enhance their child's development (Doernberg 1972).

Thus general changes in the parents attitudes and knowledge of retardation could also be viewed as important measures in evaluating a program. Cunningham & Jeffree (1975) suggest that by increasing the parents' ability to manage and train their children one may expect greater parent confidence and reduced anxiety in dealing with their retarded child. Other negative aspects, such as feelings of guilt are eliminated as the parents gain a more positive attitude towards their child.

Research at present, has not attempted to measure changes in these types of variables, except in terms of vague anecdotal reports by the parents. (Cunningham & Jeffree 1975; Salzinger et al 1975).

GENERALIZATION AND DURABILITY MEASURES

Although the importance of generalization and durability (henceforth considered as temporal generalization), is widely recognised, it seems that this has been a neglected area of research investigation (O'Dell 1974; Keeley, Sheinberg & Carbonell 1976). Attention now needs to be directed toward determining what the most effective and efficient methods are for implementing generality, and determining assessment measures.

Baer & Stones (1976) discuss various techniques designed to promote generalization. Their review of 250 studies relevant to the problem of generalization, centres around devising a technology specifically for teaching retarded children new skills and maintaining the skills after training. Successful generalization of some new learning across responses, stimuli and setting has occurred through teaching a sufficient number of exemplars. (Stokes, Baer & Jackson 1974; Lovaas, Berberich, Perfloff & Schaeffer 1966). The concept of training loosely (i.e. teaching with little stimulus or response control) is suggested as a possible way of enhancing generalization of the skills being taught - but the ultimate force of this recommendation remains to be seen.

Intermittent reinforcement has been shown to be resistant to extinction, and in that resistance to extinction can be viewed as a form of generalization (generalization across time) can be considered as a part of the technology.

The most dependable of all generalization techniques is the transfer of behaviour control from the teacher to natural stable contingencies that operate in the child's normal environment. "The natural community of reinforcement contingencies should not only mainain the child's new skills but may sharpen and refine them; and add entirely new ones as well" (Baer & Stokes 1976, p.8).

Baer and Stokes conclude that research on producing a technology of generalization is an important piece of unfinished business both for basic and applied research.

The experimental design which is best suited to studying generalization is the group design (O'Leary & Kent 1973). With single subject designs, studies of generalization effects may suffer from extraneous variables - such as "spontaneous remission" there is evidence that certain problem behaviours, such as lack of co-operation, fighting, demanding attention, tend to diminish with age (Sheitman 1971).

Another problem is the possibility of a correlation among independent measures. For example, with measures of classroom disruptiveness, changing attentive behaviour may also perforce change "out of seat" behaviour - such a change not being due to a generalization of the treatment effect. Therefore generalization can be shown only if the two behaviours do not tend to show natural correlative changes.

Forehand and Atkeson's review on procedures used to assess and implement generality, reveals the unfortunate fact that the more rigorous the method of assessment the less positive the results. Most studies relying on parent reports suggested that temporal generality had occurred, however, Patterson's (1974) systematic follow-up showed this not to be the case.

An examination of various outcome measures (for example parent reports, simulated situations, unbiased observers) seems vital in assessing which treatment procedures enhance generalization (Forehand & Atkeson 1977).

Thus the methodology involved in assessing and implementing parent training groups is at present deficient. O'Dell (1974) suggests that the lack of adherence to strict methodological standards can be attributed to difficulties of applied research, rather than a lack

of concern for measurement and control. However this is no excuse for the applied researcher and rather than lowering the standards of research, he or she should try harder (Baer et al 1968).

The present study has attempted as far as possible to work within the criteria established by O'Dell (1974), and adhere to strict methodological standards.

Overall, behaviour modification has provided a well structured approach which with a few exceptions (Herbert et al 1973; Sajwaj 1973) has been positively viewed in studies aimed at involving parents in the treatment of their children. And, in that the majority of parents of mentally retarded children want and need guidance in the application of practical ideas and teaching techniques to their children (Cunningham 1975), it seems necessary to provide them with these principles - even with the knowledge that there is an obvious lack of detailed scientific evaluation on many essential aspects of such training (as shown in the literature), and also with the knowledge that such training is clearly not a universal panacea for dealing with all the problems parents of retarded children may face.

IV. THE FAMILY TRAINING UNIT

In answer to the expressed need of parents for practical answers to practical questions, the Family Training Unit was established to provide an opportunity for parents of retarded children to learn basic behaviour shaping skills, (P. West, 1977).

The Family Training Unit is a small educational resource unit within the South Australian Intellectually Retarded Services, which has been operating since September 1976, and up until the end of 1977 had completed 10 workshops.

STAFF

The staff at the Family Training Unit consists of 2 psychologists and 2 mental deficiency nurses all of whom have had some experience of using behavioural techniques with retarded children, and also are all committed to the philosophy and aims of the Unit.

THE PHILOSOPHY AND AIMS

The philosophy of the Family Training Unit and the aims of parent training workshops as reported at the A.G.S.O.M.D. conference (West, 1977) provide the basis principles from which the programs have been devised.

One fundamental principle underlying the work of the Family Training Unit is that the staff see themselves as educators rather than therapists. The programs are concerned with giving the parents a teaching model which they can use to bring about behavioural change. There is no emphasis placed on dealing with parents' feelings of guilt, inadequacy or non-acceptance. It is thought that these feelings may be alleviated indirectly through interactions with other parents, and in gaining the skills for teaching.

The main objective of the workshop is for parents to "internalize" the teaching model, which they can then use to bring about behaviour change of their retarded child at home. The principles taught are general, they can be used by parents to teach a wide range of skills to children of different levels of functioning.

The program evaluated in this study is primarily concerned with teaching children new skills. The types of skills which are emphasised include basis self help skills (such as toileting and dressing), physical motor skills, cognitive skills (thinking and reasoning), socialization (play, personal relationships) and lanuage skills.

Although the program does focus on the acquisition of new skills the teaching model is also considered applicable for altering already existing behaviours, with a few changes in emphasis.

PARENTS

The parents that come to the Family Training Unit are not directly referred from various sources, rather they must take their own initiative to enrol, and must sign a contract, specifying their responsibilities if they decide to join a group. Therefore only motivated couples are at present using the facilities of the Family Training Unit.

Parents are taught in groups, (usually about 6 couples), and attendance of both parents is strongly encouraged. The only criterion for parent involvement is that they are enthusiastic, however sometimes the age of their child may influence them joining a certain group. (For example, a couple with a mature retarded girl sought assistance with regards to the girl's hygiene concerning menstruation - it was considered more suitable to deal with this problem on an individual basis, rather than involving these parents in a group, where the other parents had predominantly primary school aged children).

THE TEACHING MODEL

The highly structured teaching model, which the parents "internalize", is adapted from the model devised by Cunningham (1971, 1974) and consists of 4 components. The parents learn to make a behavioural assessment, to analyse the behaviour which they wish to change, to intervene and change the behaviour, and to evaluate the behaviour change.

The parents are taught this model in a step by step, "learning by doing" approach. Each skill is taught separately using techniques such as role play, modelling, video taped feedback and written exercises. The parents select one skill which they wish to teach their child, to work with during the program. Ideally the parents will learn and understand these skills to the extent that they can initiate and carry out new programs after the workshop is over.

THE STRUCTURE

Each course is presented in an average of 10 evening sessions, lasting 2 hours each. (The number of sessions has varied from 9 to 11). Although the sessions primarily run on a weekly basis, occasionally there might be a fortnight's break (Perhaps due to a public holiday, or a planned home visit).

At the conclusion of each session, parents are given some specific task to complete for the next session. At the beginning of each session, the parents are questioned in a structured but light-hearted way about their knowledge of the previous session. (The details of each session, devised by the staff of the Family Training Unit are discussed in the next section.)

Telephone contacts and home visits by one of the staff also occur at various intervals between the sessions, and after the workshop is over. These follow-ups vary across parents, and depend on their expressed need. However at least one home visit during the workshop and one visit at the completion of the workshop, is carried out per family.

Although the structure and content of the workshops may vary slightly from program to program, primarily as a result of parental feedback, the 4 stage model and teaching techniques used, have remained unaltered.

EVALUATION

Loosely structured questionnaires, given to parents at the completion of some programs, have provided encouraging feedback from the parents - parents have generally reported an increase in their feelings of competence in teaching the child.

However such evaluations have been entirely subjective, and objective formal evaluations, using before and after measures of parents skills have not as yet been made.

Up until the present evaluation, home based video recordings were seldom taken by the staff of the Family Training Unit, except for the purposes of teaching aids.

Therefore no systematic observation of parent and child behaviour changes had been undertaken.

It seems somewhat contradictory, while the parents are being taught the importance of objective evaluations the professionals have let this slide.

V. EVALUATION AIMS OF THE PRESENT STUDY

It can be seen from the literature that the possibilities for evaluation in parent training are numerous, and constantly expanding. Apart from component analyses needed to identify which variables are crucial in training parents - such as comparing the efficiency of various teaching approaches (e.g. group versus individual), teaching techniques (e.g. lectures versus role-play) and content analysis (e.g. theoretical versus "cookbook" recipes), other areas of potential investigation exist.

As pointed out by Berkowitz and Graziano (1974) the development of predictive measures of the extent of parent success would help determine the most productive means of maintaining the adaptive behaviours. Also it seems important that more meaningful measures of parental and child behaviour change be recorded in terms of attitudinal and interactional variables, as well as the conventional measures of increases in adaptive behaviours and decreases in maladaptive behaviours.

The present evaluation is concerned with these latter issues. The Family Training Unit functions as a community service operating to the best of its ability for all needy parents. Thus there are practical and ethical reasons against isolating some variables for some parents and including them for others. The possibility of comparing parents on a waiting list with those attending the workshops was eliminated. To provide a fair comparison, it seemed necessary that all the parents would need to be able to make an objective assessment of their child's level of functioning, to determine a realistic objective for their child. This assessment technique was taught during the workshop over a number of sessions, and it seemed impractical and unethical to teach this skill to the waiting list parents without giving them any further skills on how to use the assessment. Thus the possibility of comparison

group investigations to determine crucial parents training variables were eliminated.

In that the parents were required to fill in a weekly post-session evaluation sheet, information was obtained regarding what segments of the program the parents enjoyed. However apart from these subjective opinions, the present study showed no component analysis.

Instead the study looked at the differential effects of present training on the parents and children involved in the present workshops and focused on two major aspects of parent training.

I. An examination of the need for multiple measures of assessment by investigating the relationship between the following outcome measures -

a) the systematic observation of parent/child interaction via independent observers and video-tape equipment.

b) parent verbal reports of the program's effectiveness made via phone checks.

c) parent reports on the effectiveness of the workshop via evaluation sheets.

d) parent attitude changes using a Parent Attitude Inventory.

Three hypotheses were examined regarding the use of multiple measures, based on previous findings:

1. The more rigorous the assessment the less positive the results. (Forehand and Atkeson 1977; Eyburg and Johnson 1974).

2. Multiple measurements are necessary for confident conclusions can only be made by looking at their convergence (Eyberg and Johnson 1974 ; (Kent & O'Leary 1976).

3. Child improvements can be used as an indirect measure of parent success, and demonstrate the parent's functional control of child's behaviour (Wahler 1966a; Koegel et al 1977).

II. An exploration of any possible predictive measures of parent success - both short term (i.e. initial acquisition of skills) and long term (i.e. generalization of skills across behaviours) in terms of such factors as parent age, education level, involvement by both parents, parental motivation and attitudes to child rearing, parent's degree of enjoyment of weekly sessions, and child's age and degree of retardation.

The following hypotheses, based on previous literature findings were examined:

1. Parents with pessimistic attitudes regarding their ability to help their retarded child are less likely to "succeed" (Cunningham 1975).

2. Parent success is more likely when both parents are actively involved. Evidence to support this is based on the work of Tharp and Wetzel (1969) who point out that a strong reinforcer for a parent is a spouse, and in that one is likely to encourage the other, greater "success" is likely, than if only one parent is involved.

Explorations were made into other areas, either where the research had revealed inconclusive evidence, or where no systematic research was yet available.

1. The relationship between parent "success" and educational level. As evidence exists both for (Gardner 1976; Salzinger et al 1971) and against (Cunningham and Johnson, 1971) a positive relationship between educational level and parent "success", it was not possible to predict which way the relationship should be.

2. The relationship between parent "success" and initial problem tackled by the parent.

Given that one of the most reinforcing events for the parents is a desirable change in the child's behaviour, Berberich (1971) concluded that initial success would lead to parent satisfaction and generalization

to other behaviour. However, Eyberg and Johnson did not find a relationship between ease of problem and parent satisfaction.

3. The relationship between the parents' enjoyment and enthusiasm at the weekly sessions and their "success". Although no parent training research exists pertaining to this issue it was hypothesised that parents who enjoyed the weekly sessions would show greater success in applying what they had learnt than those parents who were less enthusiastic.

4. The relationship between the child's age and degree of retardation and parent success. As the material covered in the workshop was considered relevant to all parents of retarded children, regardless of the child's age or degree of retardation it was hypothesised that there would be no relationship between child's age or degree of retardation and success of the program.

5. The effect of group size on parent "success". It was hypothesised that the smaller group may be more successful, because of the more personalised attention that was available to each parent, in the group.

6. The relationship between parents' attitudes (especially discipline and locus of control) and parent success. It was hypothesised that those parents who felt that they had control over their environment (that is internal locus of control orientation) would be more successful than those parents who felt they had little control over their environment. Similarly, those parents with a more rigid attitude to discipline were considered as more likely to be successful, because of the importance of consistency or persistence in applying the principles.

SECTION 2 - METHOD

I. THE SUBJECTS

A total of 14 parents and 9 retarded children (one family had 2 retarded children) made up the final subject pool for the evaluation.

Two parent training programs were evaluated - one group (Monday night) with 6 couples, the second group (Tuesday night) with only 2 couples. The very small size of this second group was due to a large attrition rate between the introductory session and the first session. Unfortunately there was not sufficient time to obtain replacement parents and with the two couples announcing that they were quite happy with the small group, the program continued as usual.

The age range of the children at the commencement of the programs was from three years to eight years, with a mean of 5.7 years. All of the school aged children attended special schools, and none of the children had ever been institutionalized. Based on assessments made through the Intellectually Retarded Services, the children were classified as being mildly, moderately or very retarded.

The parents all varied considerably across age and education level. Three parents were in the 20 - 30 age bracket, five in the 31 - 40 age bracket, five in the 41 - 50 age bracket and one parent was over 50. The highest level of education reached by the parents was collapsed into three groups - Parents who gained no further education past school were in Group 1; Parents who commenced or completed a technical course were in Group 2 and Parents who commenced or completed a course at a tertiary institution were in Group 3. Nine parents were in Group 1, two in Group 2 and two in Group 3.

While one parent professed some knowledge of operant conditioning,

none had every carried out any systematic conditioning program or received any training in how to do so.

The parents chose which night of the week they intended to come to the workshop (either Monday or Tuesday), so the two groups were therefore randomly allocated.

A target behaviour for each child was selected by the parents after they had learnt to make a behavioural assessment. Thus, the behaviours worked on during the workshops varied considerably and were dependant on the childrens' individual level of development, as well as the parents opinion of what was an important skill for their child to learn.

Although the emphasis of the workshop was skills-training, a couple of parents chose to work with a behaviour problem-increasing co-operation.

The demographic details of the parents and children, and the child target behaviours are represented in Table 1.

TABLE 1: Demographic details of parents and children involved in workshops

NAME	AGE GROUP (years) 1. 20-30 2. 31-40 3. 41-50 4. Over 50	EDUCATION LEVEL 1. School 2. Technical 3. Tertiary	NO. OF CHILDREN	NAME OF CHILD	ORDINAL POSITION	CHILD'S AGE (Years & Months)	DEGREE OF RETARDATION 1. Mild 2. Moderate 3. Very	GROUP	SKILL TAUGHT IN WORKSHOP	SECOND SKILL (Where available)
Mr A	2	1	2	David	1	6.1	3	Tuesday	Ride a bike	No
Mrs A	2	1	2	Steven	2	5.4	3	Tuesday	Take off clothes	No
Mr B	2	3	2	Hanna	1	3.3	3	Tuesday	Take off shirt	No
Mrs B	1	3	2	Hanna	1	3.3	3	Tuesday	Take off shirt	No
Mr C	1	1	2	Chantal	1	6.5	2	Monday	Identify coins	Count out objects
Mrs C	1	1	2	Chantal	1	6.5	2	Monday	Identify coins	Count out objects
Mr D	3	2	3	Darren	3	7.0	3	Monday	Identify cards	Obey 3 commands
Mrs D	3	1	3	Darren	3	7.0	3	Monday	Identify cards	Obey 3 commands
Mr E	3	1	3	Matt	3	8.6	1	Monday	Co-operates with requests	No
Mrs E	3	1	3	Matt	3	8.6	1	Monday	Co-operates with requests	No
Mr F	4	1	5	Paul	5	7.6	1	Monday	Draw a maze	Count blocks
Mrs F	3	1	5	Paul	5	7.6	1	Monday	Draw a maze	Count blocks
Mr G	2	1	2	Johnny	2	6.5	2	Dropped out	Put on socks	Co-operate with request
Mrs G	2	1	2	Johnny	2	6.5	2	Monday	Put on socks	Co-operate with request

II. PROCEDURE

The Workshops

The length of the two workshops varied although the material covered was the same. It became evident that because of the small size, the Tuesday Group moved through the material covered in the sessions much faster as there were fewer questions and discussions on individual problems. The parents expressed a wish to quicken the pace so the course was cut back to nine sessions. The Monday Group however needed eleven sessions to cover the material.

As the majority of the parents were in this group, the detailed description of the structure and content of the sessions was based directly from this Monday Group. It is important to remember that the Tuesday Group covered exactly the same material and with the same structure.

Introductory Session

Two weeks prior to commencing the workshop, the parents attended an introductory session, so they could decide if they were interested in attending. They were given a factual description of the aims and philosophy of the F.T.U. - that the F.T.U. is primarily an educational facility which aims to teach parents how to teach their children new skills; and also that the F.T.U. is a resource centre, able to provide information of the services and facilities available to retarded children.

The parents were shown a video tape of parents who had attended previous workshops, working with their children providing examples of the types of skills the parents had worked on - self help motor, cognitive, socialization and language skills were mentioned.

The staff introduced themselves and gave details of their experience and personal philosophies, and then the parents introduced themselves and gave a brief account of their child.

The parents were informed of the administrative details (that is dates and times), and it was emphasized that they should only consider coming if both parents could attend every week. They were also informed that their active participation in the sessions was encouraged, and that the course required their completing of homework assignments.

The serious intent of the F.T.U. was accentuated by the contracts which the parents were requesed to sign if they intended to take part. (See Appendix A). The staff of the F.T.U. impressed on the parents the seriousness of the workshop - the long hours spent in setting up such programs required a strong commitment to the concept of the F.T.U., and they wanted the parents to realize that this was a workshop that was not to be taken half-heartedly. However they assured the parents that apart from finding the sessions useful, they also were intended to be enjoyable, and on the basis of previous workshops this was usually so. That the parents would get to know the other parents of retarded children (as well as the staff) and have an opportunity to discuss their own problems was also guaranteed.

There was no obligation to join up after the introduction. The parents were given the contract, the introduction sheet, and application form to take home, and if they decided to participate were requested to send in the application form and the contract.

Session 1

Session 1 began with a brief welcome and recollection of names, dates and times of sessions.

The parents were introduced to the experimenter who explained that she was evaluating the effectiveness of the workshop, for the purposes of future improvements to the Family Training Unit as well as her own requirements for post-graduate research.

The experimenter briefly mentioned how she intended to conduct her research, and that it would require involvement from the parents in terms of a number of home video sessions, and filling out questionnaires. The parents were all willing to co-operate with the experimenter.

The parents were then given the Parent Attitude Questionnaire (for the purposes of the present research) and the Main Areas of Interest Handout, (See Appendix B), so that the staff could cite relevant examples when teaching the model. These were filled in and returned, immediately.

After a coffee break where they could meet one another more personally, the actual teaching commenced. (A coffee break occurred at a suitable place in each session and usually lasted 10 minutes). The action model was presented and the 4 stages briefly explained. Then the details of the ~~first~~ part of the model - assessment - was introduced. It was emphasized that in order to make a good assessment of their child the parents must be able to accurately observe their child's activities. The limitations of non-specific observations were made obvious by having the parents try and write down everything that happens from a segment of tape. The parents were then taught two specific observation procedures - a frequency count and a duration recording - using stop watches and hand counters.

The homework for the week was for parents to go home and practise using their new observation skills (not necessarily with their children). They were able to take the stop watches and hand

counters home for the week to practise.

At the end of this and every session the parents were requested to fill in a post-session evaluation sheet (See Appendix C), where they were encouraged to be frank and honest. These evaluation sheets were only for the use of the present research and therefore were not usually presented in the workshop.

Session 2

Session 2 commenced with the parents each reporting on their home observations, and discussing any difficulties they faced.

The parents were then asked to write down 3 ways of observing behaviour, to test their memory and refresh it if required.

By the use of a role play by the staff, and a videorecording of a segment of a television program, the parents were taught the concept of reliability and how to make a reliability check and the importance of defining behaviour.

This led into the concept of "thinking behaviourally". By the use of a number of hand outs where the parents had to write down what types of behaviours constituted certain dispositions (e.g. happy, sad,hyperactive), the parents were taught how to "think behaviourally", and the rationale behind this concept. Two basic points were discussed:-

1. That "thinking behaviourally" gives a person something objective to observe and therefore to work with.
2. "thinking behaviourally" reduced the likelihood that value judgements would affect a person's attitudes and expectations. A child either rolls his head back and forth or he doesn't. Thus it is not necessary to use value - laden labels such as hyperactive, autistic when dealing with this behaviour.

The homework for the week was to go home and produce a reliable observation, using either a frequency count or a duration measure.

Session 3

This session began with the discussion of session 2's homework, followed by a test, asked parents why they were taught to "think behaviourally".

The parents were then given a developmental checklist based on the Portage Guide to Early Education (Shearer & Shearer, 1972). The checklist covers five main areas - socialization, self help, motor, cognitive, and language skills (See Appendix D).

The parents were then taught, by the use of a video tape how to make a behavioural assessment using the checklist.

The importance of this assessment - in that it points out strengths and weaknesses, shows how development occurs in a sequence, shows where the child is at, in this sequence, and teaches parents to observe - was emphasized during the session.

The homework was to complete the sections of the checklist with their own children, that were covered in the session.

Session 4

The parents were entitled to discuss at some length any problems surprises or difficulties they encountered in their last week's homework, and the entire session was concerned with continuing through the video tape, giving parents practise in the more difficult parts of the Portage Checklist - cognitive and language skills. The homework was to complete their assessment of their own child, and on the basis of this assessment select one area which interested them, and one skill which they would like to teach their child, based on the assessment.

Session 5

Any problems with the last part of the checklist were discussed.

Having selected a behaviour to work with, the parents were taught to formulate that behaviour in terms of a behavioural objective. A behavioural objective is a precise definition of the behaviour that the child will learn, including the condition under which it will be taught and the degree of success which will be acceptable.

The parents were given a number of handouts explaining how to formulate behavioural objectives (See Appendix E), and examples of good behavioural objectives were provided. They were asked to pull out examples from the checklist and practise formulating their own. Thus it is the parents who state at the onset, exactly what they consider a success for the child and for themselves.

The homework for this week was to formulate a behavioural objective for their own program.

Session 6

Session 6 commenced with a discussion on the behavioural objectives the parents formulated during the week.

Is the objective realistic in terms of the child's present level of functioning? Can such a program be practically implemented? Will it be beneficial? These questions were referred to in relation to each individual child, based on home videos and the behaviour checklist assessment.

The second half of this session was concerned with showing the parents the importance of having a child's attention and cooperation, before the child can be taught anything. Video taped examples of children lacking attention and cooperation using 3 observation measures - a frequency count, a duration

measure, and latency measure.

For their homework assignment, the parents were asked to take a baseline measure of their own child's degree of attention and cooperation (See Appendix F).

Session 7

This session commenced with a discussion of the parents' baseline records and each child was individually discussed as to whether the parents needed to shape up attention and cooperation.

By the use of video records of trainers working with retarded institutionalized children, and parents at home with their children, the principles of rewarding, prompting, shaping and ignoring were introduced and discussed.

The parents were then shown how to make records and it was suggested that one parent runs a program while the other observes and records, and then the parents change roles.

The homework was to try and use these principles to shape up attention and cooperation if necessary.

Session 8

The parents attempts to shape up attention and cooperation were discussed and further suggestions based on any problems that arose were made.

The session was primarily concerned with explaining the principles of task analysis. Task analysis involves breaking a skill down into easily learned and simple parts. The parents practised analysing a number of hypothetical situations, and slides and video-recordings were used to exemplify the task analysis process.

For homework the parents were asked to breakdown the skill they had chosen to work with and produce a written statement of the steps which would then form the basis of the teaching program.

Session 9

The parents' task analyses were examined and suggestions were made to improve them if seen as necessary.

Surprised expressions were evident on many faces when a blackboard was uncovered to reveal the following:

TONIGHT'S BEHAVIOURAL OBJECTIVE

WHO	:	Father
WILL DO WHAT	:	Knit 6 stiches (purl or plain)
UNDER WHAT CONDITIONS	:	Without aid
TO WHAT DEGREE OF SUCCESS	:	Consecutively with 100% success

The parents were split into groups of four, with one father being the trainee, one mother, the trainer, and two recorders.

The teaching sessions were video-taped, and the replays led to a general discussion about such things as the value of task analysis, the use of physical prompts and the need for graduated guidance, the difficulties of learning a new skill, and the frustration on both the part of the trainer and trainee. The value of records was also made evident by this teaching exercise.

Session 10

This session commenced with parents being given an introduction to simple reinforcement theory. Emphasis was placed on the argument that the theory applies equally to their own behaviour as it does to their child's behaviour (See Appendix G).

The actual techniques of rewarding, prompting, fading, requesting, ignoring inappropriate behaviour and graduated guidance were explained, again using videotapes of adult role plays and videos of real situations with retarded children in programs.

The staff performed role plays of teaching a retarded child simple skills, using these techniques.

By this stage it was assumed that the parents had started on their programs or were ready to commence.

Session 11

The final session began with a technical film showing the use of these principles in teaching autistic children to use language. The film was based on work of Lovaas. (Lovaas, Loegel, Simmons & Long, 1973).

Discussion on the film and discussion on any problems with the parent's own programs followed. Evaluation by the use of continuous monitoring from the initial baseline was emphasized as crucial in checking the progress of the program. Parents were again shown methods of recording and graphing, and encouraged to use graphs and records when carrying out programs.

The staff ended the session with a recapitulation of the action model with reference to the skills the parents should have learned.

The parents were told they were to feel free to contact the F.T.U., as often as they liked, and would be contacted in the near future for a home visit. They filled in a post-program evaluation and officially the workshop was over.

Overall, the amount of professional time required for the 8 families ranged from 22 - 24 hours of workshop, with the number of hours of home visits ranging from 3 hours to 8 hours with an average of 4.7 hours. This does not include the time taken for telephone calls or staff meetings.

MEASUREMENT PROCEDURES

Various measures of treatment outcome were obtained for each parent except in a few circumstances where data collection was impossible due to unavoidable problems associated with field research.

These difficulties will be discussed separately when examining the results of individual parents.

The measures were:

1. The systematic observation of parents teaching their child the target behaviour, by the use of independent observers and video tape equipment, both before and after the intervention.
2. Parent reports on the effectiveness of the workshop via evaluation sheets. (After each session and after the whole workshop).
3. Parent attitude changes using a Parent Attitude Inventory.
4. Parent verbal reports of the programs effectiveness made via phone check.

The procedures involved in obtaining the data will be detailed separately for each measure.

(1) Home Based Video Observations

"Objective" measurement of parent and child behaviours before and after training in behaviour modification principles, was obtained by the use of home-based video taped recordings of the parents interacting with their children.

RECORDING PROCEDURES

It was predetermined that at least 40 home visits needed to be made to obtain reliable baseline and post treatment measures of behaviours. The families were randomly allocated to the staff members of the F.T.U. and the present researcher - the only criterion for allocation was that the parents were familiar with the person doing the recording, through attending the programs (thus a staff member who was not involved in the Monday night group, did not go to any of the parents who attended this group). Numerous discussions between the members of staff and the researcher, determining and outlining the procedural format and strategies of these home based records, facilitated uniformity in approach, and in that a recorder obtained both the pre- and post- tapes for any family further reduced the reactivity effects of variation across recorders.

The first series of home visits were carried out after the fourth session of the workshops when the parents had chosen the behaviour that they intended to work with during the workshop. Although this may seem late, it was in fact the earliest opportunity available for the parents needed to be instructed in observation and assessment before they could select a suitable behaviour to teach their child. This part of the action model took four sessions to explain. However in that the parents had

not been given any information regarding teaching techniques or changing maladaptive behaviours, the home visits could still be seen as providing base line data on both the parent and child target behaviours.

It was important to make these home visits seem relevant and useful to the parents, and to make use of "partial concealment" (Weick, 1968) to avoid the reactive effects of observation as far as possible. The parents were told that in order to determine whether they had chosen a suitable behaviour, on the basis of their assessment, a video taped recording of the child attempting the task would be made. The parents were instructed to try and teach the child as they would normally and ignore the presence of the camera.

Each parent was recorded working individually with their child, so different approaches to teaching could be measured. The parents were told that this was to see if the child behaved differently towards one or other parent. Thus without any blatant deception, the video tape was seen by the parents as focusing purely on the child's behaviour, while in fact the parent's responses were also of primary importance.

The parents were then asked what other behaviour they might work on, after they had completed the workshop. They were asked to select a behaviour that was quite unrelated to the first behaviour - so that they would be able to run two programs concurrently if they so desired. The selection of unrelated behaviours was important for the purpose of the research, to show that changes in the second behaviour were not due to natural correlations existing between the two behaviours, rather due to generalization across teaching skills. Videotaped recordings were taken where possible of each parent attempting to teach this second skill to the child. However

some practical problems prevented all of the parents working on a second skill (See Discussion).

A number of trials were made at each home visit, depending on the nature of the task and the willingness of the parents and the child. There were two weeks between session 4 and session 5, so 2 or 3 home visits could be made to each family to obtain reliable baselines. At each visit the order of the behaviours and the order of the parent-child interaction varied to avoid practice effects; and where more than one trial was obtained in a visit, a considerable time lapse occurred between the trials, to prevent the child (and parent) becoming frustrated. Therefore the length of the home visits varied considerably ranging from about 45 minutes to 2 hours.

At the completion of the workshop, the families were all visited again, and each parent was video taped teaching their child the behaviour they had worked on during the workshop, and teaching their child the second behaviour they had selected for the baseline tapes. Again the focus was seen by the parents as being on the child - to assess the child's improvement.

Only after completing the post-workshop video tapes (and obtaining enough trials to show regular behaviour patterns) did the staff make further suggestions to the parents on intervention strategies if they were necessary.

OBSERVATION PROCEDURES

Two observers (one completely naive as to which tapes were pre- and post- intervention tapes) independently assessed using stop watches and counters each of the tapes in a random order according to the following scoring procedure.

"There are two separate procedures involved depending on whether the objective involves teaching new skills, or whether the objective involves dealing with a behaviour problem such as lack of cooperation".

A. Objective: Teaching a new skill

1. Define a trial.

A trial is equivalent to the objective set out by the parent. In the baseline tapes one trail usually is equivalent to the whole task, while in the follow up tapes one trial is equivalent to the bit of the task the parent is working on at the time of the follow-up.

2. Record length of trial.

From when parent commences objective until child had made some attempt, and the parent has responded to that attempt.

FOR EACH TRIAL: MEASUREMENT OF CHILD BEHAVIOURS

1. Record the child's amount of attention to the task. Only record when child attending to some aspect of the objective.

2. Record the child's degree of success at the task according to the following 5 point scale.

(1) Totally unsuccessful;

(2) Successfully completes some part of the task but reliance on prompts.

(3) Approximately completes all of the task, but reliance on prompts.

(4) Successfully completes all of the task, but reliance on prompts.

(5) Totally successful - i.e. completes objective unaided.

3. Record the child's inappropriate behaviour. Define and record (either frequency or duration) any behaviour that directly interferes with the task at hand.

MEASUREMENT OF PARENT BEHAVIOURS

1. Use of SD's: the parents instruction to the child

(a) Count the total number of relevant requests (that is: requests pertaining to the execution of the specified task).

(b) Count the number of different relevant requests used. (N.B. A request is not different if only a noun or number is changed to suit part of the trial).

(c) Count the number of clear easily discriminated requests.

(d) Count the number of times the requests are made when the child is attending to the task (that is: sitting quietly looking at task or at parent).

2. Use of Prompts: shaping the child to respond correctly.

(a) Count the number of effective and ineffective physical and verbal prompts.

(A prompt is an extra cue used temporarily to teach a new behaviour - makes clear what a child is supposed to do.

Therefore "come on" is a request and not a prompt; while repetition of a word in teaching language is a prompt and not a request.

An effective prompt is a prompt which evokes a correct response - the child then knows exactly what to do).

3. Response to Appropriate Behaviour

(a) Count the number of successive approximations or complete successes the child makes.

(b) Count the number of immediate, positive, effective, contingent reinforcements (immediate, contingent = within

3 seconds of child completing response. Positive, effective = something the child clearly enjoys, and responds to).

(c) Count the number of partial positive reinforcements. (Postive feedback but not presented effectively (so child shows appreciation) or presented after 3 seconds).

(d) Count the number of times, no contingent positive reinforcement occurs.

(e) For each immediate, positive effective reinforcement, record whether the reinforcer was primary or social.

4. Response to Inappropriate Behaviour

(That is behaviour which interferes with the objective).

(a) Count the number of times the parent ignores this behaviour.

(b) Count the number of times the parent ignores this behaviour and provides an alternative.

(c) Count the number of times contingent punishment occurs (that is something the child does not like).

(d) Count the number of times contingent positive reinforcement occurs (that is something the child clearly likes).

(e) Count the number of times attention is paid to the behaviour.

5. Use of Task Analysis

For each trial, record whether or not task analysis has been used.

(Task analysis is evident when there is a premeditated idea to teach only a small section of the task, and for the child to master that bit before the next bit of the task is taught.)

B. Objective: Increasing Co-operation

Sixty second intervals constituted separate trials.

FOR EACH TRIAL

1. Count the number of relevant requests (that is: requests specifically relating to co-operation.

2. Count the number of times requests made when the child is attending (that is: looking at parent).

3. Count the number of times the child ignores request or refuses to co-operate, observe the parent response to lack of co-operation.

4. Count the number of times the parent ignores lack of co-operation.

5. Count the number of times the parent punishes lack of co-operation.

6. Count the number of times the parent positively reinforces lack of co-operation.

7. Count the number of times the parent attends to lack of co-operation.

8. Count the number of times the child co-operates.

Observe the parent response to co-operation

9. Count the number of positive reinforcements.

10. Count the number of times parent ignores the co-operation.

11. Count the number of times the parent punishes the co-operation.

Observe any other inappropriate behaviour (as set out in A: Objective: Teaching a new skill).

A number of practice sessions to familiarize the observers with the scoring procedures enabled the observers to discuss discrepancies and definitions before actually commencing on the video tapes.

Each segment of the tapes representing one trail was repeated until both observers felt that they had all the information. (Usually about 5 times per trial). Raw data sheets enabled easy tabulation of the information. (See Appendix H).

RELIABILITY

Both observers went through all of the trials of all of the tapes.

Interobserver reliability was calculated by dividing the total number of agreements by the total number of agreements plus disagreements and multiplying by 100.

Table 2 presents the total number of reliability checks and the mean percentages agreement obtained for all behaviour categories. The agreement between the observers shown in Table 2, was high for all response categories.

TABLE 2

Mean Percentages of Agreement obtained for all Parent and Child Behaviours

BEHAVIOURS	TOTAL NO. OF CHECKS	MEAN PERCENTAGE OF AGREEMENT
Child Behaviours		
Amount of attention	142	86
No. of inappropriate behaviours	142	88
Degree of success	142	96
Parent Behaviours (Mother and Father)		
No. of requests	140	92
No. of different requests	141	94
No. of requests made when child attending	140	87
No. of effective prompts	139	83
No. of ineffective prompts	139	96
No. of immediate positive reinforcements	140	98
No. of partial positive reinforcements	140	92
No. of times parent ignores inappropriate behaviour	140	96
No. of times Task Analysis Used	142	100
TOTAL:	1,687	92.3%

(2) Post Workshop Evaluation Questionnaire

After the last session of the workshop the parents were all given a short questionnaire which they filled in anonomously.

Questions included "Were your expectations of this course fulfilled?" "How much do you approve of behaviour modification as a child rearing technique?" "How much improvement have you seen in your child's behaviour since the beginning of the course?" "How strongly would you recommend this course to other parents?" (See Appendix I).

These questionnaires were filled in anonomously; however it became obvious that in order to examine the correlation between the measures, identification of the parent's evaluation form was necessary.

In the telephone follow-up the parents were exaplained the reason behind the need for identification, and no parent objected to the loss of anonymity.

(3) Parent Attitude Inventory

A parent attitude inventory (P.A.I.) was derived from items used in Rotter's I-E Scale (Rotter, 1966), Biater's I-E Questionnaire for Children (Biater, 1961), Parental Attitude Research Instrument (Schaefer and Bell, 1958), Opinions regarding Discipline Scale (Itkin, 1952), and Attitudes to Freedom of Children (Koch et al, 1934). Additional items specifically related to mentally retarded children were included.

The Inventory consisted of a 30 item forced choice test, which aimed to measure the parents' Locus of Control Orientation, and their attitude to discipline.

All of the items were randomly ordered by the use of random numbers tables. The scoring involved transferring A,a, d , and

and D into 1, 2, 3 and 4 respectively, and summating the scores of the items relevant to the scales. A number of items were reversed to prevent "response sets". (See Appendix J).

A control group of 13 parents (of normal children) responding to a notice in a doctor's surgery matched across age, number of children and education level were given the P.A.I. twice (at three month intervals) to determine test - retest reliability. Their attitudes were also available for comparison with those parents who attended the workshop. The control group was drawn from a larger group of parents, and were matched to the parents of the F.T.U. for age, education level, and number of children.

The P.A.I. was given to the experimental group parents at session 1 of the workshop and again at the conclusion of the parent program. For these parents, there was an additional section to fill in regarding expectations of the course, and how confident they were that their expectations would be fulfilled.

(4) Follow-up telephone calls

The parents were all telephoned 3 months after the completion of the workshop, by the researcher. The parents were all familiar with her as she had attended both workshops and they were all aware that her role at the F.T.U. was purely as an evaluator. The staff members had, during the workshops impressed on the parents how valuable honest feedback would be in improving the effectiveness of the F.T.U. The parents all knew that the researcher was not employed by the F.T.U. and the information they gave, could in no way be used to affect their future contacts with the F.T.U.

The phone calls were made in a standardized way to each parent based as far as possible on the following format.

"As you may or may not remember I am seeing how useful the Family Training Unit's programs are for parents' who attend them.

Would you mind giving me a few of your reactions to the workshops?

Please be quite honest as this will help increase the effectiveness of the workshops. The information will be in no way detrimental to your treatment at the F.T.U., as the staff members are very keen for honest criticisms to enhance their development."

I have a number of questions I'd like you to answer.

1. Are you still running a program? / Did you ever finish running a program? If yes,
2. How is it going? / Did it go?
3. Do/did you keep graphs or records of the child's progress?
4. How often do/did you run the program?

If no,

2. Why do you think you gave up?
3. Do you ever think you'll try again?
4. Do you think you'd need a refresher course?
5. Did you think the course was useful/useless?
6. How well did you learn the model? Could you briefly tell me the parts of the model?
7. Can you see (not just feel) any improvement in your child which is due to the course?
8. Do you ever use the behaviour checklist?
9. Have you ever looked through your folder?
10. Have you ever rung the F.T.U. with any questions/problems? Were they helpful?
11. Do you think your behaviour has changed through coming to the workshops?

SECTION 3 - RESULTS

The results of the present evaluation are presented in 5 sections.

(1) The effect of the workshop on the parents as a group. Group results on each of the measures (that is, objective behaviour changes, subjective opinions on the utility of the workshops, and parent attitudes) will be shown.

(2) The effect of the workshop on individual parents. Results across all of the measures for each individual parent will be presented.

(3) The relationship between the different parent evaluation measures.

(4) Children behaviour changes as an indirect measure of parent success. The functional relationship between child improvement at the targeted skill and parents use of behavioural techniques will be examined.

(5) Determining predictive measures of parent success.

I. THE EFFECT OF THE WORKSHOP ON THE PARENTS AS A GROUP

(1) Objective Target Behaviour Observations

Table 3 shows the mean target behaviour changes for each parent-child interaction. (See Appendix K for details of all observations). Arrows indicate the expected direction of the change if the parents had learned to successfully apply the principles taught at the workshop. Each of the expected changes, and if necessary the rationale behind the change, will be briefly mentioned below.

1. DEGREE OF SUCCESS refers to the child's success on a rating scale of 1 to 5 and is expected to increase if the parents have successfully applied the teaching model. That the parents may have altered the behavioural objective to suit the child's developmental level, should induce increased success.
2. AMOUNT OF ATTENTION refers to the child's attention to the task, as a percent of the total length of the trial, and again is expected to increase.
3. NUMBER OF RELEVANT REQUESTS refers to the number of requests the parent makes, and is expected to drop towards the optimum one request per trial. The parents were explained the possible dangers of using many requests, as the child may learn to respond on a fixed ratio or schedule greater than one, which is time consuming and unnecessary.
4. NUMBER OF DIFFERENT REQUESTS refers to the parent's use of various requests all implying one single command. As the parents were told that this may confuse the child, the expected change is for a decrease approaching the optimum 0. (That is, no different requests used).

5. NUMBER OF REQUESTS MADE WHEN THE CHILD ATTENDING was recorded as a per cent of the total number of requests made per trial, and was expected to increase, as the parents learnt the uselessness of making requests when the child was not attending.
6. NUMBER OF CLEAR REQUESTS was also recorded as a per cent of the total number of requests per trial, and was expected to increase.
7. EFFECTIVE PROMPTS were recorded as a per cent of the total number of prompts per trial, and were expected to increase.
8. EFFECTIVE POSITIVE REINFORCEMENTS were recorded as a per cent of the total responses to the child's appropriate behaviour, and were expected to increase.
9. FREQUENCY OF INAPPROPRIATE BEHAVIOUR refers to the number of times the child emits inappropriate behaviour per trial, and is expected to decrease.
10. AMOUNT OF INAPPROPRIATE BEHAVIOUR IGNORED BY THE PARENT is recorded as a per cent of the total number of responses made to the child's inappropriate behaviour and is expected to increase.

To determine treatment outcome using these objective measures, changes on each factor of the target behaviour worked on during the workshop were anlysed by paired observation t-tests for the differences between pre-treatment and post-treatment scores for all the parent's except for John's father who dropped out of the course after one week.

Results from these analyses (see Table 4) indicate a significant change in the expected direction for nine of the ten factors - degree of success, $p<.0005$; amount of attention, $p<.005$; number of relevant requests $p<.0005$; number of different

requests $p < .0005$; requests made when the child attending, $p < .025$; clear requests $p < .01$; effective prompts, $p < .0005$; positive reinforcement to appropriate behaviour, $p < .0005$; ignore inappropriate behaviour, $p < .01$.

Looking at the five factors which indicate parent target behaviours in percentages (number of requests when child attending; number of clear requests, number of effective prompts; number of positive reinforcements to appropriate behaviour; amount of inappropriate behaviour ignored), a comparison of the degree of improvement can be made simply by examining the pre-post differences for the factors.

As can be seen from Table 4 the greatest group improvement was with the number of effective prompts (49.2% increase), with positive reinforcement to appropriate behaviour also improving considerably (44.8% increase). The amount of inappropriate behaviour ignored increased 24.8% while the percentage increase of requests made when the child was attending was 18%. The number of clear requests only increased 4.9% but this did not seem to be a problem with this group of parents as the pre-treatment percentage was over 90%.

Thus, as a group it can be concluded that the parents generally acquired greater skills in the use of prompts and the appropriate use of effective positive reinforcements.

TABLE 3: Mean figures from video observations for parent and child target behaviours both before and after workshop

TARGET BEHAVIOURS (Expected change: =increase =decrease)		CHILD'S DEGREE OF SUCCESS - on rating scale of 1 ... 5( )		CHILD'S AMOUNT OF ATTENTION - as % of total length of trial( )		PARENT'S NUMBER OF REQUESTS ( )		PARENT'S NUMBER OF DIFFERENT REQUESTS ( )		PARENT'S % REQUESTS WHEN CHILD ATTENDING ( )	
Parent / Child		Before	After	Before	After	Before	After	Before	After	Before	After
Mrs D /Darren	Target Skill	1	3	50.7	91.5	11.8	7	6.4	.66	44.1	85.7
	Second Skill	3	5	30.3	64.1	18.2	5.3	1.8	0	37.5	100
Mr D /Darren	Target Skill	1	3	52.1	97.9	14.7	9	4.5	1.5	45.7	94
	Second Skill	2.4	4	35.5	77.9	13.1	5.6	2	.66	36	76.4
Mrs C /Chantal	Target Skill	1.4	3.5	94	96	7.8	2	3.4	.6	92	100
	Second Skill	3	4	95.4	98.2	5.2	1.2	2.6	0	100	100
Mr C /Chantal	Target Skill	1.6	3.6	88.7	82.6	8.6	3	5.2	.6	90	80.6
	Second Skill	3	4	91.1	91.5	8.75	4.25	3	0	95.4	88.2
Mrs F /Paul	Target Skill	1	2.25	94.2	95.5	2	2	1.2	.5	80	100
	Second Skill	1	1.7	83.1	96.5	1.75	1.75	1.5	0	81.5	100
Mr F /Paul	Target Skill	1	2	97.7	98.7	4	1	2.5	0	100	85
	Second Skill	1	1.5	96.7	97.9	2.5	1	2	0	100	100
Mrs A /Steven		2	2	100	99.2	1.3	1	0	0	100	100
Mr A /David		1.2	5	82.4	100	4.6	1	1.8	0	89	100
Mrs B /Hanna		1.6	3	88.1	100	8.3	1.5	0	0	64	100
Mr B /Hanna		2	3	98.2	99.3	10.3	1.5	1.6	0	74	100
Mrs G /John		2.5	4.2	71.5	98	8	1.25	4.1	.5	92.6	100
Mr G /John		2	2.3	69.7	67.8	11	9.6	2.2	2	100	100
Mrs E /Matt				45	79.5						
Mr E /Matt				60	93.7						

TABLE 3 (Cont...)

TARGET BEHAVIOURS (Expected change: =increase) =decrease)		PARENTS % CLEAR REQUESTS( )		PARENTS % EFFECTIVE PROMPTS ( )		PARENTS % +ve rft. to APPROPRIATE BEHAVIOUR		CHILD'S FREQUENCY OF INAPPROPRIATE BEHAVIOUR ( )		PARENTS % OF INAPPROPRIATE BEHAVIOUR IGNORED ( )		PARENT'S USE OF TASK ANALYSIS (BEH. OBJECTIVE CHANGES)	
Parent / Child		Before	After	Before	After	Before	After	Before	After	Before	After	Before	After
Mrs D /Darren	Target Skill	100	100	1	92.3	0	100	10.8	3	96.2	100	No	Yes
	Second Skill	98	100	61	-	21	44	4.5	1	96	100	No	Yes
Mr D /Darren	Target Skill	100	100	0	100	0	100	8	2.5	100	100	No	Yes
	Second Skill	100	100	77	100	0	100	6.6	1	92	100	No	Yes
Mrs C /Chantal	Target Skill	100	100	20	100	77	80	0	0	-	-	No	Yes
	Second Skill	100	100	28.5	100	40	100	0	0	-	-	No	Yes
Mr C /Chantal	Target Skill	93	100	38	50	0	100	0	0	-	-	No	Yes
	Second Skill	100	100	42	-	0	33	0	1.7	-	-	No	Yes
Mrs F /Paul	Target Skill	100	100	30.9	90	0	50	0	0	-	-	No	Yes
	Second Skill	51.2	100	35	87	0	50	0	0	-	-	No	Yes
Mr F /Paul	Target Skill	57	71	26.6	42.8	0	0	0	0	-	-	No	Yes
	Second Skill	100	100	33	50	0	0	0	0	-	-	No	Yes
Mrs A /Steven		100	100	41	47	8	0	0	0	-	-	No	No
Mr A /David		100	100	56	-	0	100	-	-	-	-	No	No
Mrs B /Hanna		72	100	33	100	100	100	-	-	-	-	No	No
Mr B /Hanna		81	100	28	80	25	100	-	-	-	-	No	No
Mrs G /John		100	100	48	90	37	60	6.5	2.7	30	90	No	No
Mr G /John		100	100	60	26	12.5	16.6	6.5	7.3	11	13.6	No	No
Mrs E /Matt						0	100	4	1.8	25	88	No	No
Mr E /Matt						100	33	3.5	1.7	35	74	No	No

TABLE 4: Parent Group means before and after training : Parent and Child Target Behaviours

TARGET BEH.	CHILD'S DEGREE OF SUCCESS	CHILD'S AMOUNT OF ATTENTION	NO. OF REQUESTS	NO. OF DIFFERENT REQUESTS	%R. WHEN ATTENDING	% CLEAR REQUESTS	% EFFECTIVE PROMPTS	%+VE RFT. APP. BEHAVIOUR	CHILD'S FREQUENCY INAP.BEH.	% IGNORE INAPP. BEH.
Mean Pre-Treatment	1.7	79.3	7.7	2.9	76.3	93.4	31.3	23.2	14.2	61.8
Mean Post-Treatment	3.1	93.1	2.8	.3	94.3	98.3	80.5	68.05	5.9	86.6
Related Sample	5.85	4.22	- 6.31	- 7.57	2.09	2.38	5.97	3.73	- 1.63	2.6
Sig. Level	P <.005	P<.005	P<.0005	P<.0005	P<.025	P<.01	P <.0005	P<.0005	P<.1 NOT SIG.	P<.01

(2) Groups Responses to the Post-Workshop Evaluation

The parents' responses to the post-workshop evaluation questionnaire expressed an overall favourable attitude towards the course.

Twelve of the thirteen parents felt that their expectations of the course were fulfilled; all of the parents strongly recommended this course to other parents of retarded children; ten of the parents felt that there was much improvement in their childs' behaviour, while the other three parents considered that some improvement had taken place. The staff were rated either 4 or 5 (on a 5 point scale of helpfulness) by all of the parents, and twelve of the thirteen parent's felt more confident in their ability to help their child.

The parents expectations of the course before and after the workshop, showed that the parents all expected to gain skills to be able to teach new behaviours, and were all but one fairly or very confident these expectations had been fulfilled. (The details of the parents' report can be found in Appendix I).

(3) Group Attitude Changes

The Parent Attitude Inventory incorporated two independent scales - an I-E Locus of Control Scale and a Discipline Scale. It was thought that the experimental groups' scores on these scales may change through attending the workshop, while the control groups' scores would remain relatively invariant over the three months.

Table 5 shows the Locus of Control Scores and Discipline Scores both before and after the workshop for all of the subjects, as well as the experimental groups Attitude Score (See Page 82).

TABLE 5

The Experimental and Control Group's Locus of Control Scores and Discipline Scores Before and After the Workshop, and the Experimental Group's Attitude Scores Before and After the Workshop.

Experimental Group

	Locus of Control Score		Discipline Score		Attitude Score	
	Before	After	Before	After	Before	After
Mr A	43	46	32	32	7	7
Mrs A	40	46	30	27	6	7
Mr B	42	44	29	32	6	6
Mrs B	39	52	37	37	7	8
Mr C	42	47	34	36	7	7
Mrs C	45	50	34	32	8	8
Mr D	33	40	33	31	4	6
Mrs D	38	38	34	28	5	5
Mr E	38	43	28	32	3	5
Mrs E	52	43	28	33	6	6
Mr F	36	35	34	33	5	7
Mrs F	36	41	30	31	2	7
Mrs G	36	38	22	29	3	6

Control Group

	Locus of Control Score		Discipline Score		
	Before	After	Before	After	
01	42	45	27	30	
02	39	42	29	28	
03	40	43	27	29	
04	37	37	28	30	
05	43	43	29	29	
06	41	42	29	28	
07	37	40	29	28	
08	41	41	30	27	
09	39	41	26	25	
10	39	40	28	30	
11	44	45	27	27	
12	40	44	31	30	
13	44	44	27	28	

(4) The Locus of Control Scores

A two-way repeated measures analysis of variance (Winer, 1970) was used to evaluate the differences between the experimental and control groups' Locus of Control Scores and establish whether any significant changes in Locus of Control orientation were evident in either group. The results shown in Table 6, indicate that while there were no significant differences between the experimental and control groups' Locus of Control orientation, there was a significant change in Locus of Control orientation. Both treatment groups became more internal in Locus of Control orientation during the three months. A significant interaction effect (treatment group by Locus of Control Score) was also evident.

As the experimental and control groups' Locus of Control scores did not differ in the pre-test phase an unrelated samples "t" test, using the pre and post difference scores was computed, to see whether one group changed more than another. This result showed a significant difference, ($t\ 129) = 2.76$, $p<.005$), in the changes between the groups. The experimental groups' changes were significantly larger than the control groups, indicating that the experimental group became more internal in Locus of Control orientation than the control group over the three months.

(5) Discipline Scores

A two-way repeated measures analysis of variance (Winer, 1970), using the discipline scores yielded a significant treatment group effect (see Table 7), showing the experimental group had a higher mean discipline score (at both phases of the study), indicating a more flexible

TABLE 6

Group Means for Pre-test and Post-test Locus of Control Scores for Experimental and Control Group, and Summary of 2x2 ANOVA with Repeated Measures.

(Group x L.O.C. Score)

Group Means	Pre L.O.C.	Post L.O.C.	
Experimental	40.0	44.1	42.05
Control	40.5	42	41.25
	40.25	43.05	41.65

SUMMARY OF ANALYSIS OF VARIANCE:

Source of Variation	S.S.	df	M.S.	F
Between Subjects				
A (Group)	8.32	1	8.32	1.38
Subjects within Groups	144.31	24	6.01	
Within Subjects				
B (L.O.C. Score)	101.92	1	101.92	22.49 *
A x B	21.97	1	21.97	5.11 *
B x Subjects within Groups	108.81	24	4.53	

* Significant at $p < .05$

TABLE 7

Group Means for Pre-test and Post-test Discipline Scores for Experimental and Control Group, and Summary of 2x2 ANOVA with Repeated Measures

(Group x Discipline Score)

Group Means	Pre L.O.C.	Post L.O.C.	
Experimental	31.1	31.7	31.4
Control	28.1	28.3	28.2
	29.6	30.0	29.8

SUMMARY OF ANALYSIS OF VARIANCE

Source of Variation	S.S.	df	M.S.	F
Between Subjects				
A (Group)	133.61	1	133.6	25.39 *
Subjects within Groups	126.4	24	5.26	
Within Subjects				
B (Disc. Score)	2.07	1	2.07	1.05
A x B	.52	1	.52	.26
B x Subjects within Groups	47.4	24	1.97	

* Significant at $p < .05$

attitude to discipline than the control group.

There was no significant change in attitude to discipline for either the experimental or control group, over the three months.

(6) P.A.I. Item Analysis

As the test retest reliability coefficients of these two scales (obtained from the control group) were not high (L.O.C. = .49, Disc = .63) individual items on the P.A.I. were examined to see if there were any significant treatment group differences either before or after the workshop. The reliability of each item using slit-half coefficients indicated considerable variation in reliability across the attitudes with only 8 of the 30 items providing significant reliability coefficients. (See Table 8).

As shown in Table 9, results of related samples "t-tests" for the group mean differences of the pre-test and post-test scores showed no significant differences for any of the items for either treatment group. That is, in neither the experimental or control group did any significant attitude change take place over the 3 months.

(7) Attitude Score

A group of items chosen as representative of attitudes expressed in the workshop were combined to provide an Attitude Score for each subject in the experimental group.

Eight items were selected as attitudes underlying the philosophy of parent training and therefore likely to be expressed in some way during the workshops.

ITEM 20: "Any parent can control his/her child if he has the right techniques" was congruent with the attitudes expressed during the workshop. However, the other seven items were not consistent with the attitudes expressed during training, and were implicitly (and sometimes explicitly) falsified during the workshops. They were:

ITEM 1: Mentally retarded children do not really understand discipline.

TABLE 8

The reliability coefficients using splithalf coefficiences for control group, using pretest and post-test responses to P.A.I. items

A1-P1	A2-P2	A3-P3	A4-P4	A5-P5	A6-P6	A7-P7	A8-P8	A9-P9	A10-P10
-.65	.06	.53*	.50*	.33	.38	.63*	.59*	.56*	.01
A11-P11	A12-P12	A13-P13	A14-P14	A15-P15	A16-P16	A17-P17	A18-P18	A19-P19	A20-P20
.11	-.09	.26	.25	.56	.41	-.006	-.37	-.21	0
A21-P21	A22-P22	A23-P23	A24-P24	A25-P25	A26-P26	A27-P27	A28-P28	A29-P29	A30-P30
.1	.24	.18	.15	-.17	.52*	.15	.09	.21	.44*

* indicates significant correlation at $<.05$ level.

TABLE 9

Results of related samples t-tests for each attitude item using, pre-treatment and post-treatment group means - both experimental and control group.

ATTITUDE ITEM	EXPERIMENTAL GROUP (N=13)			CONTROL GROUP (N=18)		
	Group mean before treatment	Group mean after treatment	Related samples 't'	Group mean before treatment	Group mean after treatment	Related samples 't'
1	3.15	3.38	-.67	3.05	3.00	.13
2	1.61	1.53	.37	1.38	1.50	-.52
3	3.0	3.0	0	2.66	2.66	0
4	2.92	2.53	1.16	3.22	3.44	-1.46
5	2.76	4.00	-.97	2.55	2.77	-1.29
6	2.23	1.84	1.59	1.94	1.83	.81
7	2.84	3.00	-.56	2.33	2.11	1.72
8	2.84	2.53	1.30	2.66	2.61	.44
9	3.30	1.12	1.08	1.83	2.05	-1.72
10	2.76	2.61	.62	1.88	2.05	-.82
11	2.69	2.23	1.72	2.11	2.55	-1.09
12	3.30	3.00	1.08	3.16	2.83	1.68
13	3.92	3.15	1.15	2.77	2.72	.44
14	3.76	3.69	.14	3.22	3.05	1.37
15	3.00	2.76	1.00	2.66	2.77	-.81
16	3.15	3.38	-.32	2.88	2.72	1.00
17	3.23	2.61	1.06	2.11	2.55	-1.03
18	2.84	4.15	-1.89	2.83	2.94	-.38
19	2.76	3.15	-1.05	3.27	3.16	.62
20	3.30	2.92	1.16	3.50	3.0	1.45
21	3.53	3.30	.82	3.11	3.00	.49
22	3.07	2.76	-1.43	2.33	2.27	.32
23	1.53	1.30	.90	1.71	1.88	-.81
24	2.23	2.38	-.62	2.16	2.16	0
25	2.61	2.92	-1.17	3.05	2.44	1.08
26	2.76	3.00	-.37	2.27	2.72	-1.29
27	2.38	2.92	-.65	1.94	2.38	-1.09
28	2.76	3.00	-1.15	2.33	2.38	-.27
29	2.38	2.53	-.52	2.05	2.44	-.98
30	3.15	3.30	-.49			

* indicates significant difference at .05 level.

ITEM 14: Punishing bad behaviour is overall more effective than praising good behaviour.

ITEM 15: How quickly a child develops is beyond the parents control.

ITEM 24: It is better for children to learn things by trial and error, than be shown the correct way by their parents.

ITEM 25: Retarded children are managed much more effectively by trained persons than by parents.

ITEM 26: Using rewards is really only bribing children to behave appropriately.

ITEM 28: Parents have their own characteristic ways of dealing with their children, and little can be done to change these patterns.

Table 5 shows the parent attitude scores both before and after the workshop. The scores were obtained simply by summating the number of items which were in agreement with those attitudes expressed by the workshop. The categories were collapsed so that both "d" and "D" were disagree and "a" and "A" were agree.

For both the before and after scores, the possible range of scores was from 0 to 8.

The mean "before" attitude score was 5.3 with a range from 2 to 8, while the mean "after" attitude was 6.5 with a range from 5 to 8. A t-test analysis (related samples), revealed a significant group difference in Attitude Score before and after the workshop ($t=2.9$ $p<.01$). However, as stated above, when each of these 8 items were analysed individually, by the use of t-tests, no significant differences were evident. (See Table 9). These results suggest that while there was a significant increase in overall attitudes in accord with those expressed in the

workshop, there was no significant change across any one item on the P.A.I.

SUMMARY OF EXPERIMENTAL ATTITUDE GROUP CHANGES AS SHOWN ON P.A.I.

Overall, it can be concluded that two significant changes were evident in the experimental group's attitudes (measured on the P.A.I.)

(1) The group's attitudes became more congruent with those expressed during the workshop (as measured by the Attitude Score)

(2) There was a significant experimental group change in L.O.C. score. (the group becomming more internal in orientation) - however this L.O.C. change was also observed, but to a lesser degree in the control group.

II. INDIVIDUAL PARENT FINDINGS

To determine predictive measures of success and examine the need for multiple measures of assessment, each parent attending the workshop was evaluated separately using four measures. The determination of each of these measures will be discussed separately.

(1) Objective Target Behaviour Changes

To examine treatment outcome for each parent, the before and after mean target behaviours (as shown in Table D) were subjected to paired observation t-tests.

The before-after figures on three factors - number of requests, number of different requests, and frequency of inappropriate behaviour - were reversed so that the expected direction of the change was uniform across all factors. If a before or after figure was not available for one or more of the factors, the factor was excluded from the analyses. (For example David exhibited no inappropriate behaviour with his father, therefore no records were made of amount of inappropriate behaviour ignored - therefore these 2 factors were excluded from the analysis.)

As shown in Table 10, six parent/child interactions changed significantly in the expected direction, at $p < .05$ level.

However, these statistics do not take account of the variation across individuals of their initial "before" score. Some parents' did not have a significant change only because their baseline records were high - yet they did show an improvement through coming to the course (for example David's father).

TABLE 10

Total objective behaviour changes for each parent - child interaction, focusing on skill chosen in workshop

Parent/child	Mean Before	Mean After	T value (related samples)	DF
Darren/mother	30.3	60.1	2.47 *	9
Darren/father	31.1	62.2	2.41 *	9
Chantal/mother	48.7	59.1	1.3	9
Chantal/father	34.9	47.8	1.16	8
Paul/mother	34.2	49.1	1.87 *	8
Paul/father	31.5	34.0	.83	8
Steven/mother	39.1	38.8	- .14	8
David/father	39.3	58.7	1.42	6
Hanna/mother	45.0	63.7	2.23 *	7
Hanna/father	38.7	61.5	1.39 *	7
Johnny/mother	38.6	56.1	2.73 *	9
Johnny/father	37.4	34.6	- .67	9
Matt/mother	24.7	49.7	1.3	1
Matt/father	25.1	66.03	1.5	1

* indicates significant difference at .05 level.

To show this a measure, the parent's objective behaviour change score was determined. This score indicated the mean improvement of the parent, as a percentage of the total possible improvement.

The Objective Behaviour Change Score (hereafter the O.B.C.S.) was obtained for each parent in the following way.

$$\text{O.B.C.S.} = \frac{\sum X}{n} \times 100$$

Where X = $\dfrac{\text{B-A change observed}}{\text{maximum possible change considering S's baseline}} \times 100$

n = the number of before-after changes available for analysis.

The Before-After changes used were:

x_1 = no. of relevant requests

x_2 = no. of different requests

x_3 = % of requests when child attending

x_4 = % of clear requests

x_5 = % of effective prompts

x_6 = % of positive reinforcements for appropriate behaviour

x_7 = % inappropriate behaviour ignored.

Thus only the parents' behaviour changes were used to obtain this score, and again the no. of relevant requests, and no. of different requests scores were reversed to obtain a uniform expected direction of change for all 7 factors. Appendix L, p.173 has details of this computation for each parent.

The O.B.C.S. used the before-after mean scores presented in Table 3. O.B.C.S. were obtained for all parents using the target behaviour changes, and O.B.C.S.'s were also obtained where possible for the second skill taught to examine generalization. These figures are also presented in Table 3.

Looking at the O.B.C.S. for the original target behaviour worked on during the program, it can be seen that the scores ranged from 100 to 3. It must be remembered that John's father dropped out of the course and his scores provided nothing more than control, "non-treatment" information. Therefore, David's father's behaviour changed optimally in teaching a skill to David, while Stephen's mother's behaviour changed only very slightly according to the videotaped records.

It can be seen that only 3 parents failed to improve more than 50% by adopting the parent behaviours advocated by the F.T.U. when teaching their child the new targeted behaviour.

Looking at the O.B.C.S.'s for non-targeted skills worked on by the parents, it can be seen that 5 of the 6 parents videotaped had O.B.C.S.'s greater than 50. It can be concluded that these 5 parents generalized the skills to teaching other behaviours. Eight parents were not videotaped teaching a second skill, either at the first and/or follow-up sessions, due to time problems or parents unprepared to start on something else with their child.

TABLE 11

Individual Parent Scores Across All Measures

OBJECTIVE & SUBJECTIVE SCORES / INDIVIDUAL PARENTS

	O.B.C.S. (Target Behaviour)	O.B.C.S. (2nd Behaviour)	Subjective Opinion Score	Use of Workshop Score
David's father	100	-	31	11
Hanna's mother	98	-	27	5
Hanna's father	94	-	27	4
Johnny's mother	81	-	28	4
Darren's mother	81	81	29	8
Darren's father	79	81	23	3
Chantal's mother	76	100	26	3
Chantal's father	62	33	27	2
Matt's mother	61	-	26	4
Paul's mother	58	72	29	4
Paul's father	40	56	29	2
Matt's father	31	-	25	3
Stephen's mother	3	-	18	0
Johnny's father	-26	-	-	-
$\bar{X}$	54.87	51.12	26.93	6.53

(2) Subjective Opinion Score

The parent's subjective opinion of the effectiveness of the course was obtained by their responses to the questionnaires handed out at the end of each session, and at the end of the course, as well as a few questions from the telephone follow-up.

Responses to the relevant items were assigned various rating scores from either 1 to 3 or 1 to 5. The mean rating of how much the parent's enjoyed each session was also included. (See Appendix P, p.224), so that the possible "Subjective Opinion Scores" (S.O.S.) ranged from 8 to 32).

Scores ranged from 18.8 to 31.7 with a mean score of 26.9. (See Table 11). These high scores indicate that the parents overall were satisfied with the course and felt they had learned something from it.

(3) Usefulness of Workshop Score

The usefulness of the workshop for each parent, in terms of actually learning the model and running a program as directed by the F.T.U. was determined by the phone check.

Each parent was asked the same specific questions requiring yes/no answers, (as well as general impressionistic questions). They were also asked how much of the model they remembered. (See Appendix P.) Answers to these questions were assigned various rating scores, so that the possible "Use of Workshop" Score (U of W.S.) ranged from 0 to 12.

As shown in Table 11, the U. of W.S. ranged from 0 to 11 with a mean of 4.1. Thus the majority of parents did not seem to use the information obtained from the F.T.U. in a very systematic manner after the workshop was over.

III. THE RELATIONSHIP BETWEEN MULTIPLE MEASURES

Table 12 shows the correlation coefficients obtained for the 4 outcome measures.

As significant cross-correlations were evident with 3 of the measures - O.B.C.S., S.O.S. and U. of W.S., it is possible to reach some decision of treatment outcome using multiple measurement criteria.

For each measurement, cases were considered successful (+) if the obtained score was greater than the mean score for the whole group. Thus a successful O.B.C.S. was any score greater than or equal to 66; a successful S.O.S. was any score greater than or equal to 27; and a successful U. of W.S. was any score greater than or equal to 4.

The outcome results on Table 13 indicate the number of measures on which results indicate success. By allocating equivalent values across the three success measures (see discussion page 123, for justification), so that the parents S.O.S, U of W.S. and O.B.C.S. were considered of equal importance, overall summaries regarding treatment outcome were obtainable.

It can be seen that for five parents, success is indicated by all of the measurements allowing a decision of successful treatment outcome to be made with considerable confidence. Where 2 of the 3 measurements indicate success (Paul's mother), the success of the treatment can only be considered with reasonable confidence, especially in view of the fact that the O.B.C.S. was negative. Where only one of the three measures indicate success (5 parents), success of the treatment can be considered as doubtful. And for 2 parents, where no successes were evident, 2 clear failure cases can be concluded.

TABLE 12

Correlation Coefficients using Pearson r,

obtained for the 4 Outcome Measures

	Objective Behaviour Change Score	O.B.C.S. (second skill)	Subjective Opinion Score	Usefulness of Workshop Score
N	14	8	13	13
O.B.C.S.		.63 *	.64 *	.69 *
O.B.C.S. (second skill)	.63 *		.25	.40
S.O.S.	.64 *	.25		.70 *
U. of W.S	.69 *	.40	.70 *	

* significant at $p < .05$

TABLE 13

Outcome results of all measures for each parent

	O.B.C.S. (target)	S.O.S.	U. of W.S	TOTALS	SUMMARY
Mr. A David's father	100 +	31 +	11 +	3	Success
Mrs. B Hanna's mother	98 +	27 +	5 +	3	Success
Mr. B Hanna's father	94 +	27 +	4 +	3	Success
Mrs. G John's mother	81 +	28 +	4 +	3	Success
Mrs. D Darren's mother	81 +	29 +	8 +	3	Success
Mrs. F Paul's mother	58 -	29 +	4 +	2	Quesionable
Mr. D Darren's father	79 +	23 -	3 -	1	Doubtful
Mrs. C Chantal's mother	76 +	26 -	3 -	1	Doubtful
Mr. C Chantal's father	62 -	27 +	2 -	1	Doubtful
Mrs. E Matt's mother	61 -	26 -	4 +	1	Doubtful
Mr. F Paul's father	40 -	29 +	2 -	1	Doubtful
Mr. E Matt's father	31 -	25 -	3 -	0	Failure
Mrs. A Stephen's mother	3 -	18 -	0 -	0	Failure

Footnote: Criterion for Success or failure for each measure was based on whether the parents' score was above or below the mean.

CRITERION	MEAN	+	-
OBCS	66	66	66
SOS	27	27	27
U. of W.S.	4	4	4

The hypothesis that multiple measures converge to allow greater confidence in conclusions (Eyberg & Johnson, 1974) is supported by these results. It can be seen that in Table 13, (excluding the O.B.C.S.- 2nd behaviour which did not significantly correlate with the other measures) those parents who had high scores on one measure tended to have high scores on the other 2 measures - similarly those parents who had low scores on one measure had low scores on the other two measures.

The second hypothesis relating to multiple measures is also supported. The mean score (as a percent of the highest possible score) of 87.1 on the S.O.S. (parents' subjective reports) was higher than the mean score on the O.B.C.S. (again as a % of the highest possible score) which was 66. These results are consistent with the hypothesis, the more objective the measurement technique the less positive the results. (Forehand and Atkeson, 1977).

IV. CHILD BEHAVIOUR CHANGES AS AN INDIRECT MEASURE OF SUCCESS

Three types of behaviour were observed for each child before and after the parent training in order to measure each child's degree of improvement. They were an overall rating of the child's success at the target task; the amount of attention the child paid to the task, and the child's amount of inappropriate behaviour.

In determining a child improvement score, the success ratings (See Table 3, Column 1) were not used as 6 of the 13 parents changed their 'behavioural objective' through gaining an understanding of the need for task analysis (shaping). Therefore these success ratings were not comparable across all of the children. The objective improvement score (the O.I.S.) was derived for each child from the other two measures, the amount of attention, and the child's amount of inappropriate behaviour. For three children (Darren, Johnny and Matt) both measures were used, but for the other children (Chantal, Paul, Steven, David and Hanna) no inappropriate behaviour was evident in either the baseline or the intervention trials, so that only the amount of attention to the task was considered in the O.I.S.

The method of calculating an O.I.S. for each child was the same method as that used for the parents' O.B.C.S.'s to account for the baseline differences. (See Appendix N, page 221). An O.I.S. was calculated for each parent/child interaction, and an average improvement for each child (across both parents) was obtained.

As shown in Table 14, all of the children except Steven showed varied improvements in their behaviour (that is, increased attention to the task, plus in 3 cases, less inappropriate behaviour). It can also be seen that the children's improvements

varied according to whether the mother or father was running the teaching sessions.

TABLE 14

Objective Improvement Score (O.I.S.) for each child focusing on the target worked on during the workshop

	Mother	Father	Average O.I.S.
David	-	100	100
Hannah	100	61	80
Johnny *	75	0	75
Darren *	77	82	79
Chantal	33	- 6	13
Matt *	58	68	63
Paul	22	43	32.7
Steven	- 1	-	- 1

* O.I.S. - included reduction in amount of inappropriate behaviour as well as increased attention to task.

TABLE 15

Correlation Coefficients (using Pearson r or Kendall's Correlation for tied ranks depending on the data) of children's O.I.S. with parent outcome measures and demographic details

	O.B.C.S.	S.O.S.	U. of W.S.	Parent's Education Level	Ordinal Position Child	Child's Age	Degree of Retardation
O.I.S.	r = .66 *	r = .42	r = .68 *	Tau = .53 *	r = -.13	r = -.07	Tau = .51*
	p < .007	p < .05	p < .005	p < .02	p < .05	p < .05	p < .03

* Significant at $p < .05$

The correlation coefficients between the children's O.I.S. and the parent's outcome measures and various demographic details are shown in Table 15. It can be seen that the correlation coefficient between the parents' objective measures of success, that is, the O.B.C.S. and the S.O.S. were predictably significant, indicating a positive relationship between observed parent behaviour changes and child improvement. However, there was not a significant correlation between the parent's subjective opinion of the effectiveness of the course (the S.O.S.) and the O.I.S. ($r=.42$, $p < .05$).

The child's degree of retardation and the parent's educational background showed significant positive correlations with the O.I.S. These correlations can be better explained in terms of parent behaviour changes, as both of these variables showed significant correlations with the parent success measures (see Section V - Predictive Measures of Success, page 101.

The child's age did not show a significant correlation with O.I.S., nor did the ordinal position of the child.

Thus, the principle finding from the O.I.S. was the significant positive relationship between objective parent success measures and the child observed improvement.

In order to determine more conclusively the functional relationship between parent behaviour changes and child improvements, the success ratings of the children whose target behaviours had not changed from the baselines sessions were examined simultaneously with their respective parent's behaviour changes. Figure 1 represents the behaviour changes in the 6 parent-child interactions where task analysis was not evident. (It was not possible to include Matt's results, as no success rating was available, because Matt's target was changing a problem behaviour rather than acquiring a new skill.)

Three parent behaviours were considered in these figures, the percentage of requests when the child was attending, the percentage of effective prompts, and the percentage of contingent positive reinforcement to appropriate behaviour. The other parent behaviours observed to determine the O.B.C. (i.e. the number of relevant requests, the number of different requests, the number of clear requests, the amount of inappropriate behaviour ignored), were not included as they were not considered the crucial factors in skills training, and/or they were not presented as percentage figures of each trial.

The average of the three percentages were computed in order to give an overall index of the parents' behaviour for each trial (See Appendix O). The child's success ratings for each trial were recorded on the same graph as the parent's behavioural index, to allow simultaneous examination of parent and child behaviour changes.

It can be seen from Figure 1 that where the parents showed an increase in correct teaching procedures, the child's success ratings also increased. Conversely, where parents failed to use the procedures correctly, then efforts to teach the children showed no measurable improvement (Steven/mother).

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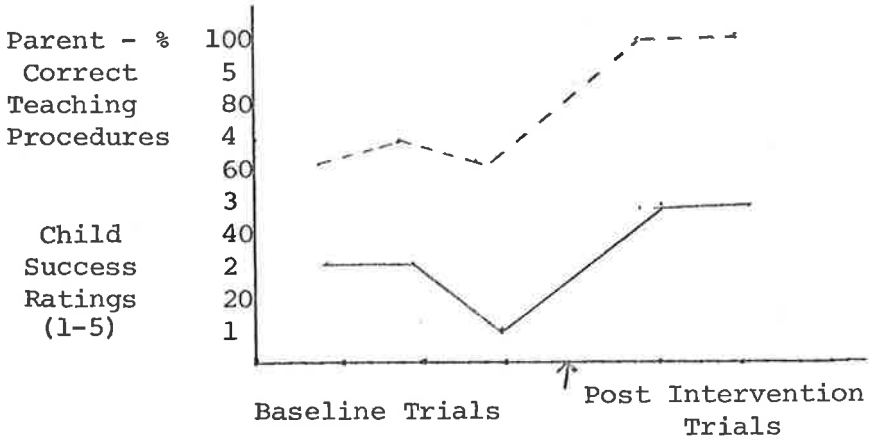
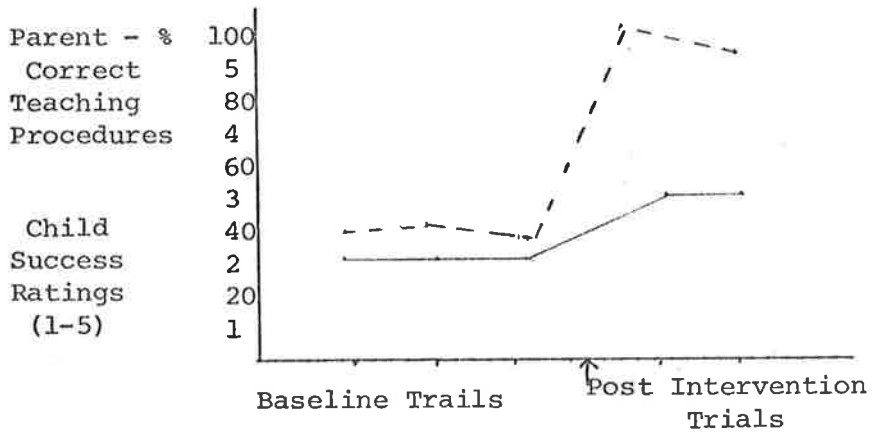
Figure 1:

The trial by trial percent of correct use of 3 behavioural techniques by parents and child success ratings at "target" skill - for each parent/child interaction where the targets remained the same across all trials.

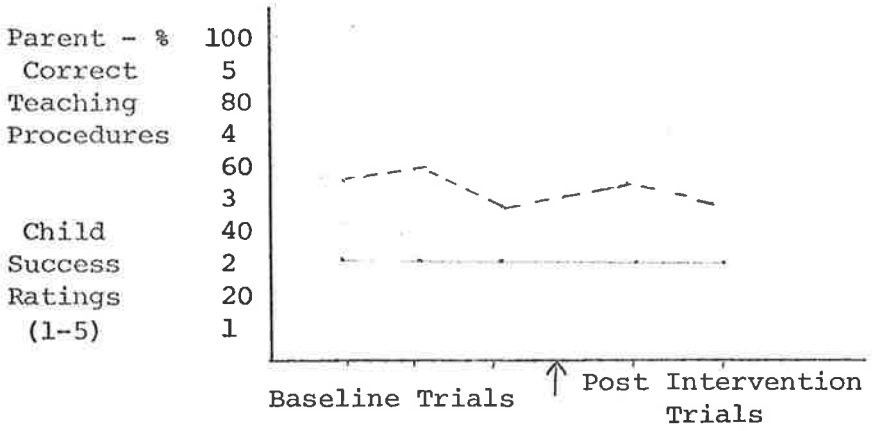


(a) Hanna / mother

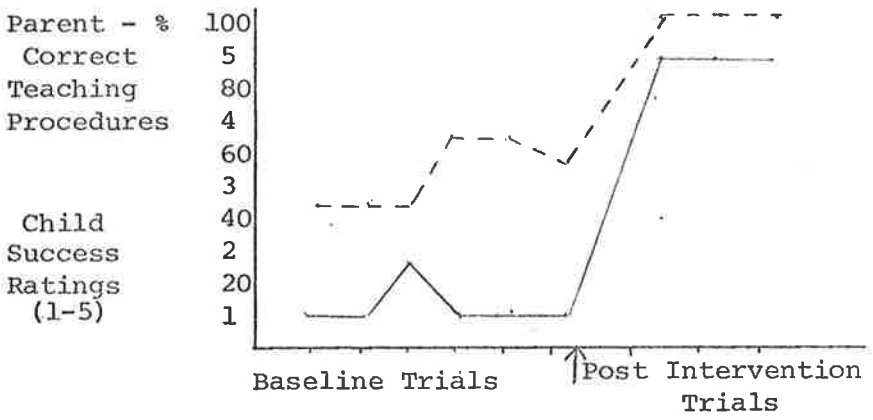


(b) Hanna / father

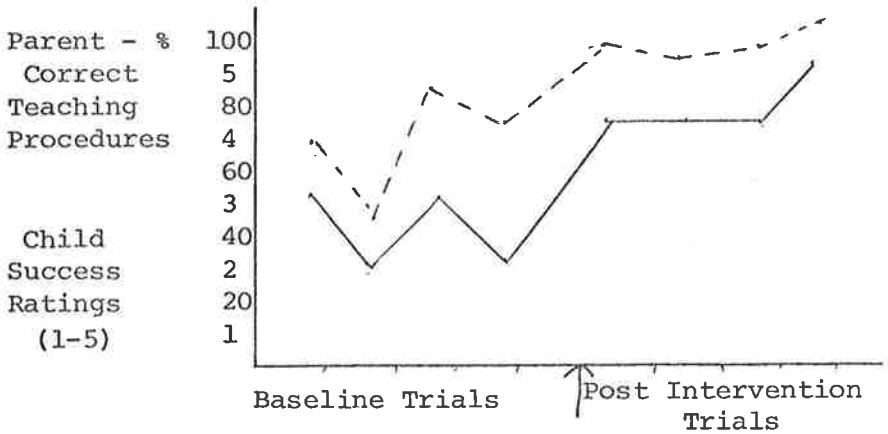
(Parent Behaviour ----------)
(Child Behaviour ——————)



(c) Steven / mother

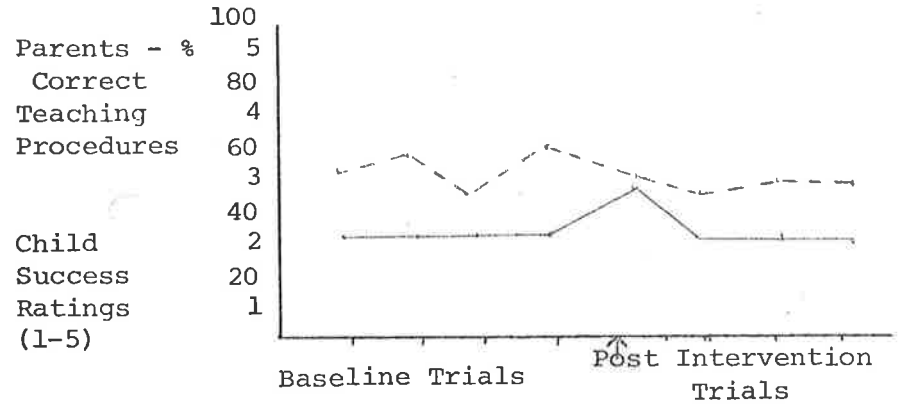


(d) David / father



(e) Johnny / mother

(Parent Behaviour ---------)
(Child Behaviour ————————)



(f) Johnny / father

(Parent Behaviour -------)
(Child Behaviour _____)

Johnny/father interactions are also shown on Figure 1, even though Johnny's father dropped out of the course after one week, to indicate the child's differential reponses to his parent's behaviours. While Johnny showed improvement with mother as the teacher, he showed no improvement in his target skill, when father was the teacher even though the trials occurred on the same day.

These findings support the hypotheses that child improvements are functionally related to the parent's teaching procedures, and therefore child improvements can be viewed as an indirect measure of parent success. However, due to the small sample of subjects eligible for this analysis (that is, those subjects who showed no changes in target between pre and post training trials) such conclusions can only be considered as tentative.

V. DETERMINING PREDICTIVE MEASURES OF PARENT SUCCESS

One problem immediately arose in dealing with this issue - to examine the possibility of any predictive measures of success it was first necessary to decide upon a "success" measure. As the three parent measures (O.B.C.S., S.O.S. and U. of W.S.) are positively correlated, the outcome results across the 3 measures (Table 13, Column 4) could have been used as the parent "success" measure. However, it is difficult to know whether the 3 measures were all true indicators of parent "success" or whether for example, the S.O.S. was measuring parent confidence or enjoyment of the workshop. Also in that parent assessments have been rigourously condemmed as being unreliable (see literature review, page 27), including the parents' S.O.S. and U. of W.S. could be viewed as a possible source of bias in predicting potential success factors. However, using the O.B.C.S. as the sole measure of success may also be seen to have limitations in terms of the possible methodological problems of independent observations as stated in the literature review.

It was finally decided to use two separate "success" measures - the objective behaviour score (the O.B.C.S.) and the overall success score across all 3 measures, (S), to see how far one differed from the other in terms of revealing potential predictors of success. Table 16 shows the correlation coefficients, (obtained by either Kendall's correlation for tied ranks or Pearson r, depending on the nature of the data), between the O.B.C.S. and S measures and the various demographic and attitude details of the parents and children involved.

It can be seen that the education level of the parents positively correlated with both S ($r=52$ $p<.007$) and with O.B.C.S. ($r= .46$ $p<.015$) indicating a positive relationship between parent "success" and education level. This supports the findings of Gardner 1975, and Salzinger et al, 1973.

The child's degree of retardation also correlated positively with both O.B.C.S. ($r= .57$ $p<.004$) and S measure ($r= .37$ $p<.03$) indicating the greater the childs' retardation, the greater the parents' success. If the assumption that the greater the retardation the more difficult the problem tackled by the parents is true, this correlation supports the findings of Eyberg and Johnson (1974) who did not find a positive relationship between ease of problem tackled and parent success.

However, as the education level of the parents positively correlated with the child's degree of retardation ($r= .66$ $p<.003$) it is impossible to draw conclusions from these correlations as to which variable is more significant in predicting success - the parents' level of education or the child's retardation. This contamination effect is examined further in the "Reasons for Individual Differences" section of the discussion, on page 106.

Parents' age, number of children, ordinal position of the child did not show a significant correlation with parent success on either measure.

No significant correlations were found between the parents enjoyment of the workshop and their O.B.C.S. or S scores. Nor was there a significant correlation between the parents subjective opinion of their child's improvement (as taken from point rating scale - used in the S.O.S.) and the child's O.I.S. However, there was a positive correlation between the parents' enjoyment of the workshop and the parents' opinions of their child's improvement ($r= .69$ $p<.001$).

TABLE 16

Correlation coefficients of O.B.C.S. and S Outcome Measures and various demographic and attitudinal features of parents and children

(using either Pearson or Kendalls Correlation for tied ranks, depending on whether ordinal or interval data provided).

Parent/Child Details	Data Produced	O.B.C.S.	S
Education level of parents	Ordinal (tied ranks)	.52 *	.46 *
Child's degree of Retardation	Ordinal (tied ranks)	.57 *	.37 *
No. of children	Interval	- .13	- .14
Ordinal position of child	Interval	- .43	- .23
Parents Age	Interval	- .34	- .18
Parents enjoyment of course	Ordinal	.02	.16
Pre-attitude score	Interval	.26	~~-.06~~
Post-attitude score	Interval	.10	.00
Pre L.O.C. score	Interval	.32	.15
Post L.O.C. score	Interval	- .30	- .15
Pre Disc Score	Interval	.27	.16
Post Disc Score	Interval	.38	- .03
L.O.C. Change	Interval	- .03	- .17
Disc Change	Interval	- .2	.11

* Significant at $p < .05$ level.

The correlation coefficients between parent success and various aspects of the parent's attitudes were examined.

It was hypothesised that successful parents from the workshops would either be more internal or become more internal in L.O.C. orientation - they would feel they have greater control over their environment, more specifically their child. However, there was no significant correlation between success (either O.B.C.S. or S) and parents pre-workshop L.O.C. orientation, post-workshop L.O.C. orientation, nor was a significant correlation found between change in L.O.C. score and parent success.

It was also hypothesised that successful parents would be those with a more rigid attitude to discipline (conforming to the need for consistency). However,again no significant correlation was evident between parent success and pre-workshop discipline score post-workshop discipline score, or change in discipline score.

Finally, it was postulated that the greater the congruence between the parents' attitudes and those attitudes conveyed during the workshop, the more likely it was that the parents would accept and adopt the learning skills presented in the sessions. However, no significant correlations were evident regarding parent's attitude scores and their success scores.

It was postulated that the parents in the smaller group may have been more successful than the parents from the larger group. However, it is evident from the results that the size of the group did not effect success as no significant differences were found in the parents' from the Monday or Tuesday Group, when looking at their O.B.C.S. scores ($t = .44$, $p > .05$) or their overall S scores ($t = .78$, $p > .05$). Results of t-tests (unrelated samples) also revealed no significant differences between the sex of the parent and success, or either the O.B.C.S. measure ($t = .13$, $p > .05$) or the S measure ($t = .53$, $p > .05$).

To conclude, only two potential predictors of parent success emerged - the parent's level of education and the child's degree of retardation. And clearly the small number of subjects allows only tentative conclusions to be drawn.

SECTION 4 - DISCUSSION

The following discussion will consist of four areas of concern - an exploration into the reasons for individual differences in parent success, the consequences of using multiple measures, methodological problems encountered in the present study and the practical implications and possible areas for future research.

I. POSSIBLE REASONS FOR INDIVIDUAL DIFFERENCES

The results indicate that the workshops were successful in changing the behaviours of all the parents (so that they were in accord with the techniques taught in the workshops) to some degree. However, an almost maximum dispersion of changes, as measured by the objective behaviour change score, was evident - one mother increased her skills only 3%, while a father (in fact her husband) increased his teaching skills 100%.

This dispersion immediately raises questions as to why some parents accepted and learnt the techniques taught in the workshop and why some parents did not. The fact that the two groups did not show any significant difference in terms of improvement indicates that the members of staff in any one group were not inferior or superior teachers. The parents' ratings of the staff (See Appendix I) also support this finding. However, a number of reasons can be suggeste as to why there was such marked individual differences.

That the parents trying to deal solely with behaviour problems did not indicate great success in terms of adopting the new skills (Matt's mother and father) is understandable considering that the course focussed on teaching techniques used to teach new skills, rather than on the amelioration of behaviour problems. The use

of time out, for example, is one vital aspect of dealing with behaviour problems and included in most training programmes dealing with problem behaviours (Griffen & Hudson, 1978). Time out was not mentioned throughout the course.

Therefore, the application of the workshop to dealing with behaviour problems must be considered limited, and although these parents' were glad they had attended, and felt more confident in handling their child, objective records suggest that the course was not particularly suited to their major concerns.

The parents level of education seemed to have some effect on the parents' success. The parents who had a higher level of education (both quantity and quality were considered in classifying the parents), generally showed greater mastery of the new skills that had been taught in the workshops. This suggests a need for examination of the content of the workshops to determine whether the level of training is perhaps too general, or requires too high a literacy standard for everyone to comprehend the programme. The need for more specific, structured training, teaching "cookbook recipes" should be considered. However, it is hard to imagine a workshop that is more specific, while at the same time still catering to the wide range of problems and skills presently being dealt with in the workshop. However, the educational background does not account for all the differences in the parents' scores, for the greatest improvement (O.B.C.S. = 100) in fact was evident in a parent from the lowest education level category. It therefore seems necessary to look for other reasons which affect the learning potential of the parents.

Motivation of parents, which has been suggested as the most important area of concern in setting up any program (Griffin & Hudson, 1978; O'Dell, 1974) appeared to be high in all of the

parents at the introductory sessions of the workshops. However, although the parents all wanted to do the best for their retarded children, their dedication to working through skills training programs varied considerably. In fact only one parent kept written records of the child's progress throughout a program, even though this part of the course was emphasized as very important.

The importance of parent trainers gaining behavioural control of the parents by adopting the same principles they are teaching in their training, has been stressed in the literature (Loeber and Weisman, 1975). Parent behaviour must be prompted, shaped and reinforced. This seemed to be lacking in the workshops under evaluation. Instead the workshops relied on the children's behaviour changes acting as sufficient reinforcers for the new parent behaviours, along with the intermittent reinforcement providing by the staff in terms of the verbal feedback of parent's performance based on the videotaped records of home visits. However, it is clear that for many parents these reinforcers were not enough. The urgency in teaching a child new skills is unlikely to be the same in all parents, and the parents' persistence is likely to be a function of this urgency. This is supported by the fact that parents of the more retarded children tended to have higher scores (both objective behaviour change scores and total success scores) than the other parents. It can be assumed that the urgency (and therefore motivation) in teaching a skill to a child who has very few other skills, is probably greater than the urgency in teaching a skill to a child that already has a wide repertoire of skills. Also the reinforcement value to the parent of the child's new behaviour may be higher in the more retarded children, as these children show very few

behavioural gains over long periods of time.

The need for effective reinforcement contingencies for all the parents attending the workshop seems crucial, and the possibility of using attendance contingencies, reimbursement of fees and more structured feedback devices (such as the bug-in-the-ear receiver, and regular videotaped recordings) must be considered as means to enhance motivation.

The individual differences must be considered in the light of the subject selection procedure. Parent attendance at the workshops was purely voluntary - although the parents may have had the program recommended by various agencies, no parents were directly coerced into attending (for example by a referral note). This method of subject selection did have a significant effect on the types of parents who attend the workshops. It can be seen from the demographic details that all of the highly educated parents attending the workshops had a very retarded child. This selective subject pool may have come about for a number of reasons. Perhaps highly educated parents feel that they can deal with mild retardation without help or perhaps these parents feel the stigma attached in attending such a group is not worth the possible gains, and are thus prepared to put up with the problem faced in having a mildly retarded child. Another possible explanation is that only highly educated parents are prepared to try teaching a severely retarded child. However, regardless of the cause, a definite contamination effect between the child's degree of retardation and the parent's education level was evident.

This contamination makes if difficult to arrive at any confident predictive statements regarding success. Is it sufficient

to be a highly motivated parent (through having a very retarded child)? Or is being a highly educated parent a necessary factor for success? Or is the combination of both factors critical? Considering the effort and persistence needed to run a skills - training program with a retarded child, it could be hypothesized that motivation is the most critical factor.

However, the small sample size of the present study makes this impossible to determine.

II. THE USE OF MULTIPLE MEASURES

The two hypotheses examined in the present study regarding the use of multiple measures were both supported - that is through their convergence, multiple measures allow more confident conclusions, and the more rigorous the assessment measure the less positive the results. A number of considerations can be raised in the light of these findings.

Looking only at the group objective behaviour changes recorded by an outside observer (See Table 4), there seem to be some problems in the parent-trainers' transferring the skills to the parent groups as a whole. For example, the percentage of effective positive reinforcements to appropriate behaviour exhibited by the parent group as a whole changed from a baseline of 23% to 68% after the workshop. Also the mean O.B.C.S. Score across all parents was 66, showing that considerable room for further improvement existed in several cases.

Such improvement figures can not be seen as very high, when one considers the drop-off in parent behaviour changes that is likely to occur over time. It seems that with the persistent effort required to maintain these changes and the minimal follow-up provided, it is very likely that some parents will soon resort back to their old characteristic ways of responding to their children.

However, as seen in the literature and the the present study, the concept of teaching parents new behavioural management skills is a very realistic one. Clearly, the teachers from the workshops have the ability to do so, as evidenced by the big improvements in some parents. Changes to the workshop based on the findings

of the present study should facilitate development in this area. However, based on the present study, it does seem reasonable to conclude that the objective behaviour changes as a group were not great.

Yet, as seen in the post workshop evaluations, all of the parents felt that there was some improvement in their child's behaviour and they all (except one) felt more confident in their ability to help their retarded child. How can this apparent inconsistency be explained?

An issue often overlooked in evaluations of programs of this kind, is the effects of the workshop on the parents over and above skills training. This is where the value of multiple measures of evaluation can be seen, for the subjective opinions of the parents highlighted other positive effects of the workshops, which were not evident in the objective videotaped recordings.

Of the ten parents who answered the question: "What did you like best about the course?" in the post workshop evaluation sheet, no mention was made of learning new teaching techniques (even though some parents had learnt them very well). Rather comments referred to meeting other parents with similar problems, learning about retardation, general discussion and friendly approachable staff. It seems that some parents found most satisfaction in realizing that they had had to face, and found support and comfort in being able to raise and discuss, many aspects of being a parent of a retarded child.

One interesting finding was that while there was a significant positive correlation between the parents' enjoyment of the course and the parents' subjective opinion of the childs' improvement, there was no correlation between the parents' subjective opinion of their childs' improvement and the childs' objective opinion score. That all of the parents reported an improvement in their

children, when in fact changes in the child's target behaviours were not great - indicates some sort of attitude change took place through attending the workshop.

This attitude change can be considered in two ways. One possible explanation for this attitude change is that some of the parents experienced a state of cognitive dissonance (Festinger, 1957), the source of which was a disconfirmed expectancy. When the parents filled out the P.A.I. they were also required to write down what they expected from the course and how confident they were that these expectations would be fulfilled. All of the parents reported that they expected to learn skills which they could use to teach their child new skills, or to help with behaviour problems. (See Appendix K). Yet the overall success rating (using the 3 measures - See Table 13) showed that only 5 parents could be clearly considered as successfully learning and applying the skills they were taught in the workshops.

Mann's description of an individual confronted with such a cognitive dissonance through a disconfirmed expectation seems to accurately portray the condition of the other eight parents. "The person may have prepared himself psychologically for an event that never eventuates, and worse still may have even made public his predictions about the event" (Mann, 1969, p. 123).

Given that this uncomfortable dissonant state was present for these parents, then as is commonly observed in dealing with dissonance, attempts are made to reduce it. What can be concluded from the results of the present study, is that these parents reduced the dissonance, by reporting improvements in their child, when in fact these improvements may have been only marginal, if they were there at all.

The second explanation for this attitude change is that many of the parents lowered the threshold of what was considered to be acceptable development, once they had attended the workshop.

Two features of the workshop probably initiated this attitude. Firstly, the parents' anecdotal reports on their children's development indicated the variations in speed of development and enabled parents to consider what were realistic and reasonable expectations for their child's development. Secondly, the need for working with only small increments of behaviour change was emphasized by the staff, impressing on the parents that constant guiding and specific training was necessary for teaching any skills to retarded children.

The parents' confessions of guilt and anxiety and expressions of anger at the attitudes of the general public and inadequate facilities available to retarded children could be considered irrelevant to the function of the workshops. However, these aspects served the very positive function of making parents realise they were not alone in feeling these emotions, and much support from other parents (and staff) was reported through vocalizing these issues.

Thus overall, the so called side effects mentioned in the introductory sessions of the workshop (that is our opportunity to meet other parents, and discuss general problems and concerns) in many parents' eyes, became the most positive features of the course.

The value of subjective, parent questionnaires is therefore of paramount importance in an evaluation of this kind. By only considering the objective independently observed measure of assessment, the utility of the workshop to the parents as a group must be viewed as limited. However, examination of the parents' opinions of the workshop, results in the workshops being

seen as invaluable.

The Parent Attitude Inventory Scores also indicated an overall group attitude change to one more in accord with the philosophy underlying the training course.

The parents came to see that a child's rate of development in certain areas can be enhanced, learned the importance of showing children how to do something and the importance of praising good behaviour. Such attitude changes are bound to result in parents gaining increased confidence in dealing with their child.

III. METHODOLOGICAL ISSUES

The validity of conclusions can only be considered in light of the methodology involved in reaching the results. The present section describes some of the problems and limitations that arose in the selection and use of adequate data gathering instruments and in determining the experimental design.

(a) The Problems of gathering objective observations

Devising an objective measure of assessment resulted in technological problems. The usual concern of reactivity (see literature review, page 27) was made evident in some of the home videotapes. Reactions by the parent and child to the camera, parents striving for optimum performance for the sake of the experimenter raises questions as to how representative the taped interactions were of everyday teaching sessions. However, the technique of "partial concealment" (that is the parents thought the focus of attention was only on the child) was emphasized at all of the home visits, and appeared to keep differential reactions across individual parents at a minimum. Observation of the tapes indicated that the degree of reactivity was evenly balanced across all the parent-child interactions.

The observation code used for the present study, overall produced high reliability across the two observers (see Table 2). However, the period of discussion and interpretation of the practise tapes was lengthy, and it would be interesting to know whether two other observers would come to the same interpretations of the coding system. However, this is not a major issue for the purposes of the present study since the

same two observers observed all the tapes, so that their biases (if any) would be consistent across all subjects.

(b) Devising an objective measure of assessment

An objective measure of parent success was decided upon by considering the limitations of previous researchers' measurement tools. Determining the child's level of improvement has often been used as an indirect measure of parent training success. Such studies often lack evidence to show the causal connection between child behaviour and parent behaviour (Hall et al 1972; Johnson, 1971; Wahler, 1969; Wolf and Risley, 1964), and where this connection is shown by the use of reversal or multiple baseline design (e.g. Patterson), there is still no demonstration of which parent behaviours occurred as a result of the training programme.

Another method of measuring parent success has been to observe specific parent behaviours. However, most studies are only concerned with one or two parent behaviours - such as attending to appropriate behaviour, ignoring inappropriate behaviour (Parsonson et al, 1974, Miller et al, 1975). It can be seen that such a success measure has limitations, in that it does not try to account for all the parent changes that may take place due to the training program.

One study (Gladstone and Sherman, 1975), which did take a more global approach, measured trainee success by looking at all the trainee behaviours, where changes were expected, as well as providing an indirect measure of success by use of the childs' observed changes.

In this study, one limitation was still evident -

the trainees behaviour were all analysed separately, so that an overall measure (across all behaviours) for each trainee was not available.

The objective behaviour change score, devised for the present evaluation, enabled an overall success measure to be calculated for each parent, including all the important expected behaviour changes.

Also the Objective Behaviour Change Score (O.B.C.S.) was devised to take account of the individual parents' baseline target behaviours, in determining the amount of improvement the parents' showed in teaching a skill to their child. The problem of a parent showing very little improvement, due to a high baseline, was avoided by using the maximum possible change from the subjects baseline for each target behaviour rather than just looking at the observed change.

One possible criticism of the O.B.C.S. is the experimenter assumed the seven parent target behaviours (number of relevant requests, number of different requests, percentage of requests made when the child attending, percentage of clear requests, percentage of effective prompts, percentage of positive reinforcements to appropriate behaviour, and percentage of inappropriate behaviour ignored,) were of equal importance in the parents' training. However, from the content of the workshop, the amount of time spent in teaching these behaviours, indicatedthat this is not the case. More attention was focused on teaching effective prompts, and establishing correct response contingencies, than the establishment of effective discriminative stimuli (that is, requests). However, no other alternative scoring

procedure, that would more precisely represent the skills taught in the workshop was available. It was impossible (both for the staff at the F.T.U. and the experimenter) to assign "importance" ratings to the above target behaviours, so it was decided that the O.B.C.S. was the most suitable score for representing the skills taught at the Family Training Unit. One obvious omission from the O.B.C.S. was the parents' skills at using task analysis (shaping). This behaviour is emphasised as a crucial component in teaching a child new skill, however, due to the nature of this skill (primarily that it cannot be subjected to a frequency count), shaping was excluded from this score.

(c) Obtaining a generalization measure

All educational programs are based on the premise that as a result of being "educated" or trained a person will generalize what he has learned to other situations. Therefore, Objective Behaviour Change Scores were also computed for the parents who were videotaped teaching their child a second skill. This was considered as a measure of generalization - this is the parent's ability to transfer the skills learnt for teaching one skill to teaching a completely unrelated skill. Unfortunately, the accuracy of the score as a true indicator of generalization must be considered as doubtful. The fact that the parents were requested to start teaching a second skill immediately following the video-recording of the first skill would possibly have resulted in contaminations from practise effects, and the possible realization by the parents of the

true purpose of the observation. While one parent openly revealed this realization, it is impossible to know how many other parents correctly estimated the experimenter's intentions. Also there were problems in getting some parents to start teaching a second skill, as they felt this may interfere with the child learning the first skill. In other cases time prevented recordings being taken.

The possibility of obtaining a true objective generalization measure (without the parents awareness of what was being recorded) was considered by examining the parents' attempts to obtain the child's attention and co-operation. However, it soon became obvious that some parents had no trouble in getting their child's attention and co-operation, so the generalization of the teaching skills could not be measured for all the parents in this way.

Thus it can be concluded that the present study did not allow adequate examination of the generalization of the skills training techniques to teaching new behaviours.

(d) The validity of the use of 3 domains of measurement.

The use of three measures - O.B.C.S.,S.O.S., and U of W.S. - in determining the overall success (S) value for each parent needs some justification. The measures, that is the observed behaviour changes (the O.B.C.S.), the parents factual reports of what they did at home (the U. of W.S.), and their subjective opinions (S.O.S.) were given equal weightings after careful consideration. It is commonly stated in the literature that parent's perceptions

must be seen as a valuable measure of the impact of the treatment. (Tendall et al, 1974; Eyberg & Johnson, 1974). In fact, "objective documentation of change in the absence of positive reports from parents might well be viewed as an indication of overly specific measurement procedures that detect results of little significance". (Kent & O'Leary 1976, p.588).

Details from home visits reveal this potential danger. The behaviour of some parents, while being observed, did show reactivity. For example, Paul's mother suddenly remembered the use of task analysis half way through the second post-intervention trial, and quickly changed her teaching technique. Other parents showed distinct behaviour changes towards their children, depending on whether the video recorder was on or off.

Another reason to consider the parents' opinions of equivalent importance as the objective details, was a practical one. One could argue from the O.B.C.S. and S.O.S. measures, that some parents did learn the teaching skills successfully, yet did not appreciate the fact. (For example Darren's father and Chantal's mother). If this is so it is unlikely that these parents will maintain the new skills, if their appreciation of their value is minimal. For a program to be considered successful, it seems that an important prerequisite is that the parents see their new behaviours as more adaptive than their previous teaching techniques.

The parents use of workshop score was given equal weighting in determining the success value because, for the workshop to be considered a success in a practical sense, it was crucial that the parents were running a program and using the techniques at home apart from the

times when home visits for observation were made. The underlying aim of the workshop was for the parents (that is the person with the greatest potential as an effective change agent - through having most control over the child's environment) to learn behavioural strategies for skills training. However, the workshops could hardly be considered successful if the parents learned the teaching skills - yet failed to apply them in the child's natural environment. The use of workshop score measured the parents' degree of application of the principles in the home, and therefore was considered a vitally important measure in determining a "success" value for each parent.

For the above reasons, it was decided to give the three outcome measures equal weightings in determining the overall success rating for each parent.

(e) Measuring Child Behaviour Changes

Given that the overall aim of any parent training program is to instigate changes in the childrens' behaviours (O'Dell, 1974), an evaluation which does not examine children's behaviours could be considered incomplete. There were a number of problems associated in measuring the childrens' behaviour changes in the present study.

The most obvious problem was that the children were all learning different tasks, and therefore a general non-specific rating score of improvement was needed, in order to be applicable to all of the targeted skills. Further, in order to attribute the child's improvements (as measured by the rating scale) to the parents new learning skills, it was

crucial that each child's target did not change during the three month evaluation. However, changes were evident in three of the children, (due to the parents understanding the need to shape new behaviours through the use of task analysis) and this meant that the improvement ratings of these children were not comparable to the improvements of the other children, whose target did not change.

This problem was overcome to a degree, by examining the childrens' amount of attention to their task (regardless of what it was), and (where it was observed) the amount of inappropriate behaviour displayed by the child to establish an improvement score which was comparable across all of the children. The main limitation of the O.I.S. (objective improvement score) is that it does not take account of the children's target behaviours, which were the primary behaviours the parents sought to change.

(f) The problems associated with conducting applied research

The present experimental design enabled only indirect analysis of the relative effectiveness of the individual components of the workshop by showing group variations in the acquisition of certain skills. For example, the group as a whole seemed to gain more skills in giving effective prompts, than ignoring inappropriate behaviour (see Table 4), indicating the superiority or relatively greater concentration of one aspect of the training course over another. However, the methodology did not permit direct analysis of the components of the course. It cannot be concluded from this study which parts of the workshop produced the observed

changes in parent behaviours, only that the combination of verbal instructions, videotapes, role play and homework was effective for some parents. It would be interesting to know the value of each component in teaching the parent's the skills, but the practical and ethical problems in isolating variables in an environment functioning as a community service, (not a research laboratory), prevented this type of evaluation.

Further, the possibility of using a reversal or multiple baseline experimental design to prove the causal connection between participating in the program and changes in behaviours, was ruled out for the same ethical reasons. That all of the parents attending the workshops, changed their behaviours to some degree, to be more in line with these behaviours emphasized as important at the workshops, seemed to give enough evidence as to the causal connection between treatment and effect. Johnny's father, who dropped out after on week (yet objective records were still taken - see Table 11), added further evident to support the connection, for he was the only parent to actually show a decrease in teaching skills when comparing his before and after video recordings.

Overall, the biggest methodological problems arose out of the decision to conduct applied research.

The anticipated size of the parent group was originally 12 couples (twenty four parents). Due to a number of personal reasons, three couples did not commence a workshop, and one couple and one father dropped out after the first session. For all but one of these parents (Johnny's father), any measurement

of behaviour became unattainable for the same personal reasons that they dropped out. The adherence to strict methodological standards was often outside the experimenter's control. To ensure uniform instructions were given to the parents regarding the recording sessions, and that the content of the workshops on Monday and Tuesday night remained quantitatively and qualitatively similar, relied totally on the staff's motivation to aid the progress of the research. However, the presence of the experimenter at all the sessions, provided a constant reminder to the teachers, and minimal variations in presentation were evident.

Problems such as these can all be attributed to the limitations of working within the confines of an established service unit (and therefore having no control over the variables), rather than a lack of concern for measurement, and thereby limit the strength of the conclusions which can be drawn from the research. For example, the small number of the subjects means the conclusions drawn in determining predictive measures of success can only be considered as tentative.

Nevertheless the methodological problems as mentioned above, does not invalidate the entire piece of research. A number of practical suggestions and implications can be made in light of this study, and some crucial areas of future research can be highlighted. These issues will be raised in the next section.

IV. THE PRACTICAL IMPLICATIONS OF THE PRESENT EVALUATION AND THE DIRECTION OF FUTURE RESEARCH

The emphasis in the parent training literature at present, is still on the demonstration of causal relationships between the training programs and changes in parent and child behaviour (O'Dell, 1974). It now seems crucial for research to move beyond demonstrating the well demonstrated, and look at the specific parameters and procedures needed for the most effective training of parent groups. As stated by Keeley et al (1976, page 302): "researchers must stop flooding the literature with demonstration studies of the obvious and sometimes trivial ..... and accept the responsibility of studying complex crucial problems in complex settings."

The present study made use of multiple measures of assessment to determine the "overall" outcome of the workshops, and not just the behavioural outcome. The importance of using such measures does seem to have been well supported by the findings. The implication of these results for the future effectiveness of the functioning of the Family Training Unit is of paramount importance.

The F.T.U. needs to consider its aims and philosophy, and to consider the unit's effectiveness in fulfilling these aims, in the light of present evaluation. A number of changes seem necessary if the original philosophy and sims of the F.T.U. are still valued by the staff. That is, if skills training is to be maintained as the primary service of the F.T.U., workshop changes must be considered to ensure all of the parents attending future workshops are under the functional control of the staff. For example, tighter attendance contingencies (perhaps based on homework or graphing), more

home visits and more rigorous follow-up seem important variables to be considered.

It seems that previously held assumptions about the course content and structure need to be questioned in light of the present study. For example, the necessity of both parents attending the workshop, for maximising the effects of the program, seems doubtful, as does the assumption that the present course can be satisfactorily applied to deal with children exhibiting behaviour problems.

The present evaluation must be seen as more provocative than definitive One main purpose has been to indicate fruitful directions for future research to take. The effectiveness of the skills training course must be examined systematically. Many variables, which for practical and ethical reasons, remained constant throughout the present research need to be investigated, to determine ways of increasing the parent's ability to learn and apply the skills they were taught in the workshop.

These would include:

(a) Program participation contingencies. - Would the parents gain more from the course, if their attendance each week was dependent on their completing some homework and producing evidence of completion? Would an entrance fee to be returned if a personal program was pursued, motivate all the parents to apply their new skills at home? The need to experimentally investigate questions such as these seems a crucial part of future research.

(b) Follow-up investigations, considered a foremost concern of applied research (Gelfand and Hartman, 1968, Kazdin and Bootzin, 1972), were in the present study limited to

telephone checks approximately three months after the completion of the workshop. More controlled follow-ups seems important in determining the maintenance of the skills - training program, allow with the possible added advantage of the follow-up acting as a variable ratio reinforcer.

(c) A technology to investigate the generalization of the parents new skills is needed. The generalization measure used in the present study, was considered an unreliable measure, for the reasons mentioned above. One possible measure of generalization, which could be used, is to assess the parents' ability at teaching a skill to the retarded children's siblings, before and after the workshop. However, it was not possible to use this with all of the families in the present study as in two families the siblings were all in their late teens, or had left home.

(d) The components of the workshop, both what was presented to the parents and how the information was presented, needs to be examined in a series of controlled studies, such as Johnson and Brown (1969), who found modelling more effective than direct instruction. The inclusion of a textbook for parents such as Patterson and Guillon's, "Living with Children" (1971), or Baldwin's "Isn't it time he outgrew this." (1973), could also be systematically investigated by comparing parent groups.

(e) The need for a separate course to deal with behaviour problems seems urgent, and thus research must be pointed in this direction to devise the most efficient course for parents with retarded children, exhibiting behaviour problems.

(f) Quantitative assessment (either subjectively or objectively) of intervening variables such as the parents' self esteem, optimism, and expectations of their child is needed to determine how far these variables effect parent success.

Overall, it seems that the need for further research is real in

facilitating greater effectiveness in future parent training workshops run by the unit. However, there is the danger that controlling variables and introducing precise methodological procedures may result in the parents feeling that they are little more than deceitfully employed subjects used for experimentation, rather than needy individuals responding to a sincere community service.

This change in attitude is bound to contaminate the results of future research, as well as reduce the numbers of satisfied parents attending the workshop.

Thus, the procedures of future resarch in the area of parent training must be considered.

CONCLUSION

The most significant contribution of the present study to parent training research is the development of measurement techniques which evaluate the objective and subjective effects of the programme for each parent, as well as the behaviour changes evident in each child.

Such a comprehensive (and apparently valid) evaluation is not evident in any of the current literature, but is obviously crucial in the future planning and management of parent groups.

APPENDIX A: THE CONTRACT

THE FAMILY TRAINING UNIT (IRS)

"A COMMUNITY EDUCATIONAL SERVICE"

SERVICES CONTRACT: Education Program A

To be accepted by the Family Training Unit to participate in Education Program B, you should:

(1) Be a parent of an intellectually handicapped person and/or be working in a community setting with intellectually handicapped people.

(2) Must be able to attend each and everysession as scheduled for this particular training program.

(3) Be able to practice regularly your "behaviour changing" skills as you continually learn by actively teaching your child.

(4) Be willing to conscientiously do the learning assignments, make observations, record behaviours etc. as required by your Trainer.

On successful completion of your course, The Family Training Unit will provide to you:

(A) Direct consultations and assistance to establish learning programs in your home or work setting on a continuing basis.

(B) Access to the learning resources of the Family Training Unit - consultant personnel, a specialized library, training tool.s

(C) Opportunity to increase your "behaviour changing" skills by inviting you to participate in other learning workshops.

I agree to participate in Education Program A in accordance with the conditions outlined.

Date: ..... Signature: .....

On successful completion of this training program, The Family Training Unit will provide ..... the stated services.

.....

Date: ..... Signed: .....

Trainers

APPENDIX B: MAIN AREAS OF INTEREST

Physical Development
(standing, walking, manipulating things) ☐

Toilet Training ☐

Dressing or Undressing ☐

Language Comprehension
(understanding speech and being able to follow instructions) ☐

Language Expression
(using language meaningfully) ☐

Play ☐

Social Skills
(shopping, using public transport, meeting people etc.) ☐

Problem Behaviours
(temper tantrums, aggression, self-destructive behaviour, stereotyped behaviours) ☐

Any other area of particular interest to you _____

_____

_____

_____

_____

APPENDIX C

FAMILY TRAINING WORKSHOP - POST SESSION EVALUATION

DO NOT PUT YOUR NAME ON THIS! BE FRANK AND HONEST.

SESSION NUMBER: MONDAY / TUESDAY

1. How much did you like this session?

not at all		somewhat		very much
1	2	3	4	5

2. How much did you participate in the session?

not at all		somewhat		very much
1	2	3	4	5

3. What did you like most about the session?

4. What did you like least about the session?

Rate each of the following components on these 2 scales:

	HELPFUL SCALE		ENJOYMENT SCALE
1	Not at all helpful	1	Did not like at all
2	Not very helpful	2	Did not like much
3	Moderately helpful	3	Liked somewhat
4	Helpful	4	Likeable
5	Very helpful	5	Liked very much

COMPONENT	HELPFUL SCALE	ENJOYMENT SCALE
1. _____	1 2 3 4 5	1 2 3 4 5
2. _____	1 2 3 4 5	1 2 3 4 5
3. _____	1 2 3 4 5	1 2 3 4 5
4. _____	1 2 3 4 5	1 2 3 4 5
5. _____	1 2 3 4 5	1 2 3 4 5
6. _____	1 2 3 4 5	1 2 3 4 5

THE

BEHAVIOUR

CHECKLIST

THE DEVELOPMENT OF YOUNG MENTALLY HANDICAPPED CHILDREN

THE BEHAVIOUR CHECKLIST

1. The Behaviour Checklist is based on a developmental chart (The Portage Guide to Early Education) which looks at development during the early years of life.

2. The Checklist contains a list of skills that children learn during the early years of life. The skills have been grouped into 5 areas of development and within each area they have been further grouped into sections -

Self-Help

Section 1. Feeding
Section 2. Dressing
Section 3. Toiletting
Section 4. Cleanliness

Socialisation

Section 1. Social - Personal Relationships
Section 2. Solitary and Co-operative Play

Motor

Section 1. Mobility
Section 2. Hand Manipulation
Section 3. Coordination, Arms and Legs.

Cognitive

Section 1. Blocks
Section 2. Puzzles
Section 3. Basic Concepts

Language

Section 1. Receptive Language
Section 2. Expressive Language
Section 3. Grammar

Each section consists of a sequence of skills arranged in the order in which children usually develop them, with the more advanced skills given first and the earliest skills last. The first item within each section has been boxed in and the skills listed below this first item are ones that children develop prior to achieving this. Hence each section gives the "stages" children go through in reaching the more advanced skill.

3. The main aims of the Checklist are:

a) To help parents, teachers, nurses and anyone else working with the mentally handicapped, to OBSERVE their children.

b) To give sufficient detail of development for those working with the mentally handicapped to view it SYSTEMATICALLY and as a SEQUENCE.

c) To help those working with the mentally handicapped to work out their children's STRENGTHS and WEAKNESSES in readiness for PLANNING activities and programmes.

4. The Checklist attempts to give an idea of the sequences of development in different areas. A knowledge of the sequences will help in charting the child's present level of development. By looking at the next stage we can think ahead. There is no evidence to suggest that these developmental sequences are different in the normal and mentally handicapped child. A major difference is the speed of development. Many aspects of development take a long time to come in the mentally handicapped child. We want to ask why they are not appearing and how we can help to bring them about.

E. ZOPPA
Family Training Unit

COMPLETING THE BEHAVIOUR CHECKLIST

In order to obtain a record of the child's development, circle the numbered item if the child has learnt the skill.

If you circle the first item in the section (the boxed item) there is no need to answer the remaining items within the section; go on to the next section.

If you do not circle the boxed item, you should answer all items within the section circle items if it is something the child is doing at present or if the child used to do it.

Many of the items you will be able to answer straight away. For others you will have to observe or test the child to see what (s) he can do.

If there are any items you cannot answer please indicate by marking them (eg. ?).

SECTION 1. FEEDING

26	Picks up, carries and sets down cafeteria tray.	(103)
25	Opens ½ pint milk carton.	(102)
24	Cuts soft foods with knife (eg. bananas, baked potatoes, sausages).	(100)
23	Serves self at table and passes serving dish.	(94)
22	Helps set table by correctly placing plates and utensils with verbal clues.	(83)
21	Serves self at table, parent holding serving dish.	(82)
20	Uses knife for spreading soft toppings on toast or bread, (eg. soft butter, jam, vegemite).	(79)
19	Clears place at table.	(72)
18	Cleans up spills getting own cloth.	(68)
17	Feeds self entire meal (using spoon and fork).	(53)
16	Stabs food with fork and brings to mouth.	(46)
15	Scoops with fork.	(29)
14	Sucks liquid from glass or cup using straw.	(28)
13	Feeds self using spoon and cup with some spilling.	(26)
12	Holds and drinks from cup with one hand.	(15)
11	Eats table food with spoon independently.	(14)
10	Takes spoon filled with food to mouth with help.	(12)
9	Holds and drinks from cup using two hands.	(11)
8	Feeds self with fingers.	(10)
7	Eats semi-solid foods (eg. bananas, toast, bread) fed by parent.	(9)
6	Drinks from cup held by parent.	(8)
5	Directs bottle by guiding it toward mouth or by pushing it away.	(6)
4	Holds bottle without help while drinking.	(5)
3	Eats strained foods fed by parent.	(4)
2	Reaches for bottle.	(3)
1	Sucks and swallows liquid.	(1)

S E L F - H E L P

SECTION 2. DRESSING

25	Ties hood strings.	(104)
24	Selects appropriate clothing for temperature and occasion.	(92)
23	Ties shoes.	(90)
22	Laces shoes.	(89)
21	Dresses self completely, including all front fastenings except ties.	(81)
20	Buckles and unbuckles belt on dress or pants and shoes.	(80)
19	Buttons own clothing.	(71)
18	Unbuttons own clothing.	(70)
17	Puts on boots or shoes.	(67)
16	Buttons large buttons on button board or jacket placed on table.	(66)
15	Unbuttons large buttons on button board or jacket placed on table.	(65)
14	Initiates and completes dressing and undressing except fasteners 75% of time.	(58)
13	Dresses self with help on jumpers, shirts and all fasteners.	(54)
12	Finds front of clothing.	(52)
11	Puts on coat, jumper, shirt.	(51)
10	Puts on socks.	(50)
9	Takes off simple clothing (eg. pants, dress,) that has been unfastened.	(37)
8	Puts on shoes.	(35)
7	Zips and unzips large zipper without working catch.	(24)
6	Takes off pants when unfastened.	(23)
5	Takes off coat when unfastened.	(22)
4	Takes off shoes when laces are untied and loosened.	(21)
3	Pushes arms through sleeves, legs through pants.	(20)
2	Pulls off socks.	(19)
1	Holds out arms and legs while being dressed.	(13)

SECTION 3. TOILETTING

12	Finds correct bathroom in public place.	(101)
11	Goes to bathroom in time, undresses, wipes self, flushes toilet, and dresses unaided.	(85)
10	Wakes from sleep during night to use toilet or stays dry all night.	(76)
9	Males urinate in toilet standing up.	(57)
8	Wakes up dry two mornings out of seven.	(56)
7	Stays dry during naps.	(43)
6	Asks to go to bathroom during day in time to avoid accidents.	(41)
5	Uses bathroom for bowel movements, one daytime accident per week.	(38)
4	Urinates or defecates in potty three times per week when placed on potty.	(34)
3	Asks to go to bathroom even if too late to avoid accidents.	(32)
2	Uses words or gestures indicating need to go to bathroom.	(25)
1	Sits on potty or infant toilet seat for 5 minutes.	(17)

SECTION 4. CLEANLINESS

14	Adjusts water temperature for shower or bath.	(97)
13	Combs or brushes long hair.	(86)
12	Brushes teeth.	(84)
11	Bathes self except for back, neck and ears.	(78)
10	Wipes and blows nose 75% of the time when needed without reminders.	(77)
9	Washes hands and face.	(74)
8	Brushes teeth when given verbal instructions.	(63)
7	Blows nose when reminded.	(60)
6	Washes own arms and legs while being bathed.	(49)
5	Washes hands and face using soap when adult regulates water.	(40)
4	Brushes teeth in imitation.	(36)
3	Dries hands without help when given towel.	(31)
2	Takes towel from parent and wipes hands and face.	(27)
1	Puts hands in water and pats wet hands on face in imitation.	(16)

SOCIALISATION

SECTION 1. SOCIAL - PERSONAL RELATIONSHIPS.

28	Acts out parts of story, playing part or using puppets.	(83)
27	Comforts playmates in distress.	(79)
26	Imitates adult roles (eg. playing mothers and fathers, doctors and nurses.)	(76)
25	Asks permission to use objects belonging to others 75% of the time.	(72)
24	Apologises without reminder 75% of the time.	(68)
23	Cooperates with adult requests 75% of the time.	(61)
22	Says please and thank you without reminder 50% of the time.	(57)
21	Asks permission to use toy that peer is playing with.	(56)
20	Greets familiar adults without reminder.	(54)
19	Says please and thank you when reminded.	(47)
18	Cooperates with parental requests 50% of the time.	(44)
17	Greets peers and familiar persons when reminded.	(43)
16	Shares object or food when requested with one other child.	(42)
15	Repeats actions that produce laughter and attention.	(36)
14	Hugs and carries doll or soft toy.	(35)
13	Imitates adult in simple tasks (eg. shakes clothes, puts away toys.)	(29)
12	Imitates movements of another child at play (eg. pushing toys, block-building, waving "bye-bye").	(28)
11	Squeezes or shakes toy to produce sound in imitation.	(25)
10	Shows response to own name by looking or reaching to be picked up.	(24)
9	Hugs, pats, kisses familiar persons.	(23)
8	Waves bye-bye in imitation of adult.	(20)
7	Claps hands together in imitation of adult.	(19)
6	Vocalises to get attention.	(17)
5	Seeks eye-contact often when attended for 2-3 minutes (eg. during feeding, bathing, changing clothes, play).	(15)
4	Reaches for familiar people.	(10)
3	Pats and pulls at adult facial features (eg. hair, nose, glasses).	(8)
2	Smiles and vocalises to mirror image.	(7)
1	Smiles in response to attention by adult.	(2)

SOCIALISATION

SECTION 2. SOLITARY+COOPERATIVE PLAY

14	Follows rules of verbal reasoning game (eg. Twenty Questions, I'm Thinking of Something_____).	(78)
13	Plays with 4 - 5 other children on cooperative activity involving some degree of organisation (eg. playing "house", tag, ring-a-rosy, block construction games) without constant supervision.	(74)
12	Plays with 2 - 3 children for 20 minutes in cooperative activity (eg. bike riding).	(70)
11	Will take turns with 8 - 9 other children (eg. tea-parties, sand play, using playground equipment).	(69)
10	Plays near and talks with other children when working on own project for 30 minutes (eg. sand play, block play).	(63)
9	Will take turns with 2 - 3 other children (eg. hop-scotch, ball game, "London Bridge).	(59)
8	Follows rules in group games led by adult (eg. simple musical games such as "Drop the Hankie", "Farmer in the Dell.")	(55)
7	Plays "dress-up" games in adult clothes.	(49)
6	Plays with 2 or 3 peers (eg. pushing and pulling toys, playing with ball, looking at picture books).	(41)
5	Hands book to adult to read or share with him.	(37)
4	Takes part in game such as pushing car or rolling ball with another child for 2 - 5 minutes.	(31)
3	Plays with one other child, each doing separate activity (eg. block building, pushing toy, doll play).	(30)
2	Plays alone contentedly, not necessarily in sight of adult, but near adult activity for 15 - 20 minutes (with objects such as soft toy, kitchen utensils, mobiles, rattles.)	(16)
1	Plays unattended for 10 minutes within sight of adult (soft toys, rattles etc.)	(14)

M O T O R

SECTION 1. MOBILITY

23	Walks independently.	(55)
22	Moves from sitting to standing position.	(47)
21	Takes a few steps without support.	(45)
20	Walks with minimum aid.	(44)
19	Lowers self from standing to sitting position.	(42)
18	Stands alone for one minute.	(37)
17	Pulls self to standing position.	(31)
16	Pulls self to on-knees position.	(30)
15	Rocks back and forth on hands and knees.	(27)
14	Sits without hand support.	(25)
13	Moves from stomach to sitting position.	(24)
12	Sits self supported.	(22)
11	Crawls one body length to obtain object.	(21)
10	Bounces up and down in standing position while being supported.	(20)
9	Stands with maximum support (eg. when held around the waist).	(19)
8	Maintains sitting position, with support (eg. pillows) for 2 minutes.	(16)
7	Pulls to sitting position when grasping adult fingers.	(14)
6	Turns from back to stomach.	(13)
5	Rolls from back to side.	(12)
4	Moves forward one body length on stomach.	(11)
3	Rolls from stomach to back.	(10)
2	Turns from stomach to side, maintains position 50% of the time.	(9)
1	Holds head and chest erect supported on one arm.	(7)

MOTOR

SECTION 2. HAND MANIPULATION

32	Prints name on paper using large lines (1-2" high).	(137)
31	Folds paper square 2 times on diagonal in imitation.	(126)
30	Colours, remaining within lines 95%.	(121)
29	Hits nail with hammer.	(119)
28	Can copy small letters.	(117)
27	Prints capital letters, large, single, anywhere on paper.	(112)
26	Cuts out and pastes simple shapes.	(111)
25	Draws simple recognisable picture such as house, man, tree.	(110)
24	Screws lid on jar.	(105)
23	Makes clay shapes with 2 or 3 parts (eg. man, cat).	(103)
22	Copies series of connected V strokes VVVVVVVV	(58,C)
21	Draws a V stroke in imitation.	(53,C)
20	Snips with scissors.	(82)
19	Grasps pencil between thumb and forefinger, resting on third finger.	(78)
18	Unscrews nesting toys.	(75)
17	Folds paper in half in imitation	(73)
16	Turns door knobs, handles etc.	(65)
15	Strings 4 large beads in 2 minutes.	(64)
14	Draws (+) in imitation.	(33,C)
13	Draws a horizontal line in imitation.	(29,C)
12	Draws a vertical line in imitation.	(28,C)
11	Scribbles.	(19,C)
10	Manipulates toy or object (eg. rings a bell, puts toy in box, bangs a spoon pushes a mobile toy).	(26,S)
9	Turns pages of book several at a time.	(39)
8	Uses pincer grasp (thumb and forefinger) to pick up an object.	(32)
7	Retains 2 one-inch cubes in one hand.	(29)
6	Transfers object from one hand to the other.	(28)
5	Shakes or squeezes object placed in hand.	(13,S)
4	Holds and examines offered object for at least one minute.	(12,S)
3	Puts object in mouth.	(5)
2	Reaches and grasps object in front of him.	(3)
1	Reaches for object 6 - 9" in front of him.	(1)

MOTOR

SECTION 3. COORDINATION: ARMS AND LEGS.

33	Hangs 10 seconds from horizontal bar bearing own weight on arms.	(140)
32	Jumps from height of 12" and lands on balls of feet.	(138)
31	Rides a bicycle.	(132)
30	Hits ball with bat or stick.	(129)
29	Can jump rope by self (in skipping).	(128)
28	Catches soft ball or bean bag with one hand.	(127)
27	Climbs up step ladders or steps 10 feet high to slide.	(118)
26	Skips.	(114)
25	Hops on one foot 5 sucessive times.	(108)
24	Pedals tricycle turning corner.	(107)
23	Walks down stairs, alternating feet.	(106)
22	Bounces and catches large ball.	(102)
21	Jumps backwards 6 times.	(101)
20	Jumps over string 2 inches off the floor.	(100)
19	Jumps forward 10 times without falling.	(99)
18	Runs changing direction (eg. from left to right.)	(97)
17	Catches ball with 2 hands.	(93)
16	Marches.	(92)
15	Walks up stairs, alternating feet.	(91)
14	Pedals tricycle 5 feet.	(87)
13	Runs 10 steps with coordinated, alternating arm movement.	(86)
12	Kicks large ball when rolled to him.	(84)
11	Kicks large stationary ball.	(76)
10	Throws ball to adult 5 feet away without adult moving feet.	(69)
9	Walks downstairs with aid.	(68)
8	Jumps in place with both feet.	(66)
7	Walks upstairs with aid.	(61)
6	Pushes and pulls toys (while walking).	(59)
5	Creeps downstairs, feet first.	(56)
4	Climbs into adult chair, turns and sits.	(49)
3	Rolls a ball in imitation.	(48)
2	Creeps upstairs.	(46)
1	Flings objects haphazardly.	(26)

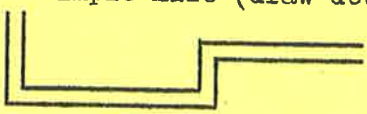
C O G N I T I V E

SECTION 1. BLOCKS

13	Arranges blocks in sequence of width and length.	(93)
12	Matches equal sets to sample of 1 to 10 blocks (eg. place 3 blocks on a sheet of paper; say, "put as many as I did on the paper").	(83)
11	Builds pyramid of 10 blocks in imitation.	(80)
10	Matches sequence or pattern of blocks.	(57)
9	Builds a bridge with 3 blocks in imitation.	(56)
8	Builds tower of 5 - 6 blocks.	(70,M)
7	Stacks 3 blocks on request.	(17)
6	Individually takes out 6 blocks from container.	(15)
5	Puts small blocks into container.	(41,M)
4	Pushes 3 blocks train style.	(10)
3	Puts 3 objects into a container, empties container.	(7)
2	Places object in container in imitation.	(4)
1	Removes object from open container by reaching into container.	(3)

COGNITIVE

SECTION 2. PUZZLES

11	Completes simple maze (draw double lines about ½" apart.) eg.  (lines ½" apart)	(101)
10	Tells what's missing when one object is removed from group of 3.	(72)
9	Completes 6 piece puzzle without trial and error.	(60)
8	Puts together 3 piece puzzle or formboard.	(81,M)
7	Stacks 5 or more rings on peg in order (according to size).	(40)
6	Puts together 4 part nesting toys.	(37)
5	Places 5 round pegs in pegboard on request.	(21)
4	Puts 1" peg in pegboard.	(52,M)
3	Removes 1" pegs from pegboard.	(51,M)
2	Puts 4 rings on peg.	(50,M)
1	Removes circle from formboard.	(12)

SECTION 3. BASIC CONCEPTS:

COLOUR SHAPE SIZE, TEXTURE NUMBERS LETTERS

29	Counts by rote 1 to 100.	(108)
28	Sight reads 10 printed words.	(105)
27	Can add and subtract combinations to 3.	(103)
26	Copies diamond shape.	(100)
25	Points to named numerals 1 to 25.	(99)
24	Matches capital to lower case letters (eg. A=a, B=b, C=c).	(98)
23	Names lower case letters of alphabet.	(97)
22	Puts numerals 1 to 10 in proper sequence.	(95)
21	Names capital letters of alphabet.	(94)
20	Names 5 letters of alphabet.	(92)
19	Says letters of alphabet in order.	(90)
18	Names 10 numerals.	(88)
17	Counts up to 20 items and tells how many.	(87)
16	Counts by rote 1 to 20.	(85)
15	Matches symbols letters and numbers.	(75)
14	Names 8 colours.	(73)
13	Copies triangle on request.	(67)
12	Names 5 textures.	(66)
11	Picks up specified number of objects on request (1 - 5).	(65)
10	Names 3 shapes, .	(64)
9	Names 3 colours on request.	(63)
8	Draws a square in imitation.	(62)
7	Counts to 10 objects in imitation.	(55)
6	Counts to 3 in imitation.	(51)
5	Names big and little objects.	(41)
4	Matches 3 colours.	(34)
3	Points to big and little on request.	(32)
2	Matches textures (eg. rough, smooth, soft, furry).	(31)
1	Copies a circle.	(30)

SECTION 1. RECEPTIVE LANGUAGE

24	Points to half and whole objects on request.	(107,C)
23	Can point to most, least, few (eg. set up groups of matches and ask child to point to group that has most, least, few.)	(89)
22	Points to missing part of pictured object (eg. draw cup with handle missing).	(84,C)
21	Places objects behind, beside, next to.	(82,C)
20	Can find top and bottom of items on request.	(76)
19	Can find pair of objects/pictures on request,(from groups of assorted objects/pictures).	(73)
18	Carries out a series of 3 directions (eg. "Get your shoes, sit down and put on your shoes").	(71)
17	Carries out a series of 2 unrelated commands (eg. "Get the ball and close the door").	(61)
16	Points to long and short object on request.	(49,C)
15	Points to boy and girl on request.	(43,C)
14	Points to 10 body parts on request.	(42,C)
13	Points to object that "is not _____" (eg. is not a ball).	(52)
12	Places object in, on and under on request.	(35,C)
11	Carries out a series of 2 related commands (eg. "First drink your milk, then wipe your mouth").	(43)
10	Points to picture of common object described by its use (eg. "Show me the one we sit on").	(40)
9	Points to 3 body parts on self.	(18)
8	Points to 3 - 5 pictures in book when named.	(17)
7	Points to one body part on request.	(16,C)
6	Points to 12 familiar objects when named.	(16)
5	Can "give me" or "show me" on request (involving choice from 2 - 3 items.)	(15)
4	Follows 3 fdifferent 1 step directions without gesture (eg. "Sit down"....."Stand up"....."Come here").	(14)
3	Stops activity at least momentarily when told "no" 75% of the time.	(5)
2	Places object in container on request.	(5,C)
1	Carries out simple direction (eg "Come here; Get the ball") when accompanied by gestures.	(4)

LANGUAGE

SECTION 2. EXPRESSIVE LANGUAGE

31	Can "tell me the opposite of ....." (Hot, Tall etc.)	(96)
30	Defines words (eg "what is a chair, cup"....etc.)	(95)
29	Tells month and day of birthday.	(104,C)
28	Names days of week in order.	(102,C)
27	Answers "why" questions (eg. about daily experiences) with an explanation.	(93)
26	Child tells what the has done after carrying out an activity.	(91)
25	Tells telephone number.	(88)
24	Tells address.	(87)
23	Tells familiar story without pictures for cues.	(81)
22	Names long and short.	(81,C)
21	Sings 5 lines of song.	(79,C)
20	Names one cent 5 cent and 10 cent pieces.	(74,C)
19	Repeats familiar rhymes.	(70,C)
18	Names objects as same and different.	(61,C)
17	Tells how common objects are used (eg. "What do we do with a cup, ball"etc.)	(66)
16	Child tells what he is doing when carrying out an activity.	(65)
15	Tells which objects go together (eg." cup and _____" "pencil and _____").	(50,C)
14	Tells full name when requested.	(62)
13	Tells if object is heavy or light.	(44,C)
12	Names action pictures (eg. "running", "jumping" etc.)	(38,C)
11	Asks question, "What's this (that)?".	(47)
10	Names familiar environmental sounds.	(37)
9	Names 4 common pictures.	(27,C)
8	Uses word for bathroom need.	(31)
7	Names 3 body parts on a doll or other person.	(27)
6	Names 4 toys.	(23)
5	Names 5 other family members including pets.	(22)
4	Says 5 different words (may use same word to refer to different objects).	(11)
3	Uses single word meaningfully to label object or person.	(9)
2	Combines 2 different syllables in vocal play.	(7)
1	Repeats same syllable 2 - 3 times (eg. "ma, ma, ma").	(2)

L A N G U A G E

SECTION 3. GRAMMAR.

21	Uses complex sentences ("She wants me to come in because _____").	(84)
20	Uses contractions "can't", "don't", "won't",.	(77)
19	Uses compound sentences (I hit the ball and it went on the road).	(75)
18	Uses "could" and "would" in speech.	(74)
17	Changes word order appropriately to ask questions.	(68)
16	Says "is" at beginning of questions when appropriate.	(59)
15	Says "can" and " will" occasionally.	(57)
14	Uses articles: the, a, in speech.	(55)
13	Uses possessive form of nouns (eg. "daddy's" "dog's").	(54)
12	Says "I, me mine" rather than own name.	(51)
11	Uses "is" in statements (this is ball).	(50)
10	Uses "this" and "that" in speech.	(49)
9	Uses regular plural forms (book/books).	(45)
8	Uses "ing" verb form (running).	(44)
7	Uses "no" or "not" in speech.	(34)
6	Combines 2 words to express posession (daddy car).	(33)
5	Combines verb or noun with "there", "here" in 2 word utterance (chair here)	(32)
4	Combines noun and verb in 2 word phrase (daddy go).	(30)
3	Combines noun or adjective and noun in 2 word phrase (ball chair, my car, big ball).	(29)
2	Says "all gone".	(13)
1	Asks for "more".	(12)

APPENDIX E

HANDOUTS FOR PARENTS ON FORMULATING BEHAVIOURAL OBJECTIVES

BEHAVIOURAL OBJECTIVES

When you have decided what you want to teach your child, you formulate a behavioural objective.

A behavioural objective is an exact statement of just what your child will do at the end of your program.

A behavioural objective is written in behavioural terms.

A behavioural objective is formulated in four parts .....

WHO / WILL DO WHAT / UNDER WHAT CONDITIONS / TO WHAT DEGREE OF SUCCESS

WHO	the name of your child
WILL DO WHAT	will count, run, stand, show, point, repeat, say, name, climb, etc.
UNDER WHAT CONDITIONS ...	how much assistance, e.g. in imitation, without aid, with support, with verbal cues, with parent guiding hand.
TO WHAT DEGREE OF SUCCESS	State how successful the child must be. It might be 100% for some academic tasks but only nine out of ten or five out of seven times for certain other skills. You decide what you call success.

EXAMPLES OF CLEAR BEHAVIOURAL OBJECTIVES

Bonnie / will put on his shorts / with one verbal prompt / six mornings out of seven.

Barry / will sit at the dinner table / while the family eat dinner / for ten minutes.

Sally / will point to red and blue / on request / five times out of five each.

Paul / button large buttons / with aid of the button being pushed ¼ of the way through the hole / ten out of ten times.

Kathy / will imitate a specific action of her father / on request / nine times out of ten.

Sarah / will walk from mother to father / with one verbal prompt / a distance of ten feet.

Lynn / will stack blocks / in imitation of adult / five out of six times.

Jill/ / will name horse, cow, dog etc., when shown the appropriate picture / with one verbal prompt / ten out of ten times.

Tom / will drink from a cup / holding it with both hands / with no spilling.

APPENDIX F

HANDOUTS FOR PARENTS ON MEASURING AND RECORDING ATTENTION AND CO-OPERATION.

ATTENTION AND CO-OPERATION - OBSERVATION EXERCISE

(1) Two behaviours are to be observed independently.

(a) Maintaining eye contact:- This behaviour is occuring only on those occasions when your child is looking directly at your eyes. Looking at other parts of your body or looking at you out of the corner of the eyes does not count as eye contact.

(b) Sitting:- This behaviour is occurring when your child is sitting upright on a chair facing the front, attending to whatever is in front of him/her. Being half in or out of the chair or having a leg slung over the side does not count as sitting.

(2) Three behaviour measures are to be recorded.

(a) The frequency of each behaviour
This simply means the number of times during the observation period that the behaviour occurs.

(b) The duration of each behaviour.
This refers to the length of time during which the behaviour occurs. Normally duration is measured with a stopwatch which is switched on when the behaviour commences and switched off when it ceases. If the behaviour occurs a number of times during a trial you simply keep on switching the watch on and off to record the total duration of the behaviour.

(c) The latency of each behaviour.
This means how long after the request before the behaviour occurs.

(3) Remember you are merely measuring the behaviours of attending and sitting at this stage.

(a) Therefore, give one prompt only. This should be either "look at me" or "sit down".

(b) Do not reward or praise your child or give any sign of approval or disappointment.

(c) Take one behaviour at a time.

(d) Do not attempt too many trials a day.
For attending you should record a maximum of five trials per day.
For sitting you should record a maximum of three trials per day.
These might well coincide with meal times.

ATTENTION RECORD SHEET - EYE CONTACT

Trial No.	Was Eye Contact Achieved YES or NO	How Long Before Child Looked (Approx. secs.)	Duration of Eye Contact (sec.)	Comment (if required)
1				
2				
3				
4				
5				
6				
7				
8				
9				
10				
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				
21				
22				
23				
24				
25				

Child's name ..... Date .....

ATTENTION RECORD SHEET - SITTING BEHAVIOUR

Trial No.	Did Child Sit (YES or NO)	How Long Before He/She Sat (approx. secs.)	Duration of Sitting Behaviour (Secs.)	Comment (if required)
1				
2				
3				
4				
5				
6				
7				
8				
9				
10				
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				
21				
22				
23				
24				
25				

Child's Name: ..... Date: .....

APPENDIX G

HANDOUT FOR PARENTS' ON OPERANT CONDITIONING THEORY AND PRACTISE

Behaviour is controlled by its consequences, that is, by the events which follow it.

This is the most basis and important principle. It represents a complete about-face for those who follow personality and other theories which look to the past for the factors which control behaviour.

Only the consequences which immediately follow a behaviour are effective in controlling that behaviour; that is, behaviour will increase or decrease according to what happens immediately after it.

The consequences which follow a behaviour alter the future probability or strength of that behaviour.

Since behaviour that has occurred cannot be altered, the events which follow a behaviour make that behaviour either more or less likely to occur in the future, e.g. if we praise a friend for cooking a particular meal we alter the future probability of that behaviour; that is, our friend is likely to cook the dish more often in the future.

Thus, by manipulating the consequences of a behaviour we can influence the future probability of the behaviour.

REWARDING

WHY REWARD YOUR CHILD?

The basic premise is that all behaviour occurs because it provides the child with rewards. In other words, learning occurs only when the child receives a reward for a behaviour, and conversely does not occur when no reward is forthcoming.

The baby learns to say "ma-ma" because saying "ma-ma" provides him with a big smile, a hug and words of praise from mother.

In short, rewarding motivates the child to learn. It also lets him know when he has completed the task correctly, it provides him with feedback.

WHAT KIND OF REWARDS SHOULD YOU GIVE?

There are numerous potential rewards, but basically they fall into two main groups:

(1) Food Rewards

(2) Social Rewards

Food rewards satisfy the child's needs (hunger, thirst).

Social rewards are events which have been paired with food rewards and have developed their own rewarding properties (e.g. praise, smile, money, playing a gam, T.V., etc.)

In the early stages of a program you will normally pair together food and social rewards (e.g. verbal praise plus chips or lollies.) Later you can gradually withdraw food rewards.

What is rewarding for one child may not be rewarding for another. You may need to try out a range of potential rewards. Generally, however, some things act as rewards for most children (e.g. food, attention). It is advisable to find more than one reward as your child may lose interest if she/he continually receives the same one. This is called satiation.

HOW SHOULD YOU REWARD YOUR CHILD?

Reward must be immediate. It must immediately follow the desired behaviour to have maximum effect, or you may reward an undesirable behaviour.

Reward must be consistent. Your child will then quickly associate the desired behaviour with the reward.

Rewards should be given in very small amounts. Your child will quickly lose interest if she/he receives large amounts.

PROMPTING AND FADING

You can use different sorts of cues to teach your child behaviours. Spoken or written instructions can be used, for example.

However, when these are not sufficient cues for behaviour to occur, you can use prompts.

Prompts are extra cues that are temporarily used to teach a new behaviour. They make clear to your child what she/he is supposed to do, and your child is then rewarded for making the correct response.

Prompts can be verbal, gestural, or physical.

As you child begins to learn you can gradually discontinue the prompts until they are no longer necessary and your child makes correct responses without help.

This gradual removal of cues is called fading.

POTENTIAL REWARDS

A. Edible Rewards

fruit	fruit juice	smarties
ice-cream	jam	potato chips
cake	jelly	marshmallow
cordial	chocolates	cake

(Remember, you will normally need to give very small portions).

B. Token Rewards

To be accumulated and exchanged for food, toys, activities etc.

stamps	points	poker chips
stars	money	coupons

C. Material Rewards

toys (of child's own choice)		music (especially cassette tape)	
books		riding a bicycle	
comics		painting	
watching T.V.		drawing	
playing games		jewellery	
crayons		note pads	
play money		whistles	
make-up		marbles	
being read a story		badges	
cutting pictures		balls	
picture dominoes		access to pets	
puppets		helping adults	
clay	etc.,	building blocks	etc.

D. Social Rewards

praise	look at child's efforts
pat child on back	tell child she/he is trying hard
stand close to child	hold child's hand
smile	hug the child
laugh with the child	nod

APPENDIX H

RECORD SHEET FOR VIDEO-OBSERVATION

Length of Trial:

Was the child successful? _____

1 2 3 4 5

Amount of attention paid to task:

PARENT BEHAVIOUR:

Requests:

No. of relevant requests	No. of different requests	No. of clear requests	No. of times requests made when child attending

Response to Appropriate:

No. of successes (or approx.)	No. of "+ve rft"	No. of partial +ve	No. rft.	Primary/Social

Use of Prompts:

No. of verbal prompts	No. of Effective Verbal P.	No. of Ineffective Verbal P.	No. of Physical Prompts	No. of Effective Physical P.	No. of Ineffective Physical P.

Response to Inappropriate Behaviour:

What kind?	No. of times ignored	No. of times ignored talt.	No. of times contingent punishment	No. of times contingent rft.	No. of times attention

Was Task Analysis Used? ☐

APPENDIX I

PARENT COURSE EVALUATION

DO NOT PUT YOUR NAME ON THIS PAPER: PLEASE BE FRANK AND HONEST

1. Were your expectations of this course fulfilled?

2. What did you like best about this course?

3. What did you like least about this course?

4. If you had to change one thing about the course, what would that be?

5. How strongly would you recommend this course to other parents?

1	2	3	4	5	(Circle a number)
not at all				very strongly	

6. How much do you approve of behaviour modification as a child rearing technique?

1	2	3	4	5	(Circle a number)
not at all		Somewhat		very much	

7. How much improvement have you seen in your child's behaviour since the beginning of the course?

1	2	3	4	5	(Circle a number)
no improvement		some improvement		much improvement	

8. Rate the staff on how helpful they were. Then say what you liked about each one, what you didn't like and how each person could become more effective in teaching the course.

Not helpful		Moderately helpful		Very helpful	
1	2	3	4	5	COMMENTS

STAFF:

1. ..... ( )
2. ..... ( )
3. ..... ( )

9. Do you feel more confident in your ability to help your children?

Please add any other comments regarding the location, time, format, etc. etc. of the Workshop so that we may consider changes which may benefit future groups.

PARENT COURSE EVALUATION

Monday Group - 11 parents
Tuesday Group - 4 parents

1. Were your expectations of the Course Fulfilled?

(10) - YES
- I didn't know what the course was about until the 5th or 6th week.

(4) - YES

2. What did you like best?

(2) - Meeting other people with the same sorts of problems
- Discussion
- Video
- Learning about slow learners
- Helpful teachers
- Friendly atmosphere
- Personal help we received with our own problems.

3. What did you like least?

- The repeated video in 3rd and 4th weeks
- Homework
- Coffee
- Theorizing without adequate explanations and examples.
- Discovering my inadequacies
- Could be condensed to 9 weeks
- I was made to feel aware of my limitations and at times felt hopeless as a help to my child.

4. What Changes would you make?

- Coffee
- Use examples instead of theory
- A more detailed teaching of how to fill in record sheets before actually doing some.
- Make it longer - more discussions.
- More visual illustration could have been useful especially regarding sequences of the checklist.

(Rating Scale 1 ..... 5)

5. How strongly would you recommend this to other parents?

$\bar{X} = 4.9$ $\bar{X} = 5$

6. How much do you approve of behaviour modification as a child rearing technique?

$\bar{X} = 4.7$ $\bar{X} = 4.7$

7. How much improvement have you seen in your child since the beginning of the course?

$\bar{X} = 3.6$ $\bar{X} = 4.5$

8. How helpful were the staff?

Monday		Tuesday	
Sue	4.9	Peter W.	5
Peter M.	4.7	Ian	5
Derrick	4.6		

9. Do you feel more confident in your ability to help your child?

(7) YES

- Somehwat
- Yes - as soon as I can overcome my disability in ignoring what my child does to get attention we may get further with teaching her.

ANY OTHER COMMENTS

- I found it most agreeably - thankyou!!
- More house calls by staff.
- Course could be longer.
- Simplify format of course.
- I would prefer an evening at the weekend.
- Tuesday night would be better as parents looked tired - had "monday-itis" attitude.
- Wonderful to meet and talk to staff and other parents - Thankyou.

APPENDIX J

PARENT ATTITUDE INVENTORY (INCLUDING SCORING PROCEDURE

Family Training Workshop - Parent Questionnaire

This Questionnaire is designed to see whether parents' attitudes can be used as predictors of performance in the F.T.U. Workshops. Your answers will be treated with strictest confidence solely for the purposes of determining future changes in the F.T.U. I would be most grateful if you would answer as honestly as possible.

NAME: AGE: 20-30 31-40 41-50 Over 50

HIGHEST LEVEL OF EDUCATION REACHED:

NAME OF CHILD: CHILD'S AGE:

WHAT I EXPECT(ED) FROM THE COURSE:

I AM VERY/FAIRY/NOT VERY CONFIDENT MY EXPECTATIONS WILL BE (WERE) FULFILLED.

ATTITUDE SURVEY

Please indicate your agreement or disagreement to the following statements by circling the appropriate letter according to this code:

A Strongly Agree

a Agree

d Disagree

D Strongly Disagree

1. Mentally retarded children do not really understand discipline. A a d D

2. It is necessary to teach a child that he cannot always have his own way. A a d D

3. Parents should not praise a child for doing something that he should ordinarily do. A a d D

4. Being a success as a parent is a matter of hard work, rather than a natural ability. A a d D

5. Most misfortunes are the result of a lack of ability laziness or ignorance rather than bad luck. A a d D

6. When ever a child deserves a scolding, he should be scolded there and then, whether strangers are present or not. A a d D

7. Young people should always obey their parents because they are their parents. A a d D

8. When someone doesn't like you, there is very little you can do about it. A a d D

9. Natural forces, not individuals, should discipline the child. A a d D

10. A child should never be forced to do something it doesn't want to do. A a d D

11. Parents must insist upon complete obedience from their children. A a d D

12. Some children are born disruptive, and there is very little a parent can do. A a d D

13. I often have no influence over the things that happen to me. A a d D

14. Punishing bad behaviour is overall more effective than praising good behaviour. A a d D

15. How quickly a child develops is beyond the parent's control. A a d D

16.	Being a 'good' parent is something you have or you have not got.	A	a	d	D
17.	A child will learn to walk when he is ready and parents can do little to hurry him up.	A	a	d	D
18.	People's lives are controlled to a large extent by accidental happenings.	A	a	d	D
19.	No child is completely unmanageable.	A	a	d	D
20.	Any parent can control his/her child, if he/she has the right techniques.	A	a	d	D
21.	It is impossible to gain control over the direction your life is heading.	A	a	d	D
22.	Children will learn for themselves to do the things which are good for them.	A	a	d	D
23.	Mentally retarded children should be managed in the same way as any other children as far as possible.	A	a	d	D
24.	It is much better for children to learn things by trial and error, than be shown the correct way by their parents.	A	a	d	D
25.	Retarded children are managed much more effectively by trained persons than by their parents.	A	a	d	D
26.	Using rewards is really only bribing children to behave appropriately.	A	a	d	D
27.	Parents should avoid using disciplinary techniques on young children.	A	a	d	D
28.	Parents have their own characteristic ways of dealing with their children and little can be done to change these patterns.	A	a	d	D
29.	Rigid training for obedience should start in infancy.	A	a	d	D
30.	If a child will not co-operate, there is very little a parent can do.	A	a	d	D

THANK YOU FOR CO-OPERATING.

SCORING PROCEDURE FOR THE P.A.I.

For all but 9 items convert A, a, d, D to 1, 2, 3, 4 respecively.

For item 4, 5, 9, 10, 19, 20, 22, 24, 27 convert A, a, d, D to 4, 3, 2, 1 respecively (i.e. reverse scoring).

Locus of Control Score

= 14 Items

A, a, d, D - 1, 2, 3, 4

Item 4 - (reverse scoring)
5 - (reverse scoring)
8
12
13
15
16
17
18
19 - (reverse scoring)
20 - (reverse scoring)
21
28
30

Range 14 - 56

Low Score = external (i.e. person perceives himself as having little control of consequences).

High Score = internal (i.e. person perceives himself as having control over his own life).

Discipline Score

= 13 Items

A, a, d, D - 1, 2, 3, 4

Item 2
3
6
7
9 - (reverse scoring)
10 - (reverse scoring)
11
14
22 - (reverse scoring)
24 - (reverse scoring)
26
27
29

Range 13 - 52

Low Score = rigid attitude to discipline.

High Score = flexible attitude to discipline.

APPENDIX K

PARENTS' OPINIONS REGARDING THEIR EXPECTATIONS OF THE COURSE BOTH BEFORE AND AFTER THE WORKSHOP - TAKEN FROM P.A.I.

PARENT	WHAT I EXPECT FROM PARTICIPATING IN THE GROUP (degree of confidence that expectations will be fulfilled)*	WHAT I EXPECTED FROM PARTICIPATING IN THE GROUP (degree of confiedence that expectations were fulfilled.) *
Paul's mother	To be able to help my child with his incapabilities, with more understanding (FAIRLY)	To help my child with his problems. (VERY)
Paul's father	A better understanding of how to help Paul. (FAIRLY)	To be able to help Paul with the basics. (VERY)
Darren's mother	To help Darren with his speech. (FAIRLY)	To help Darren learn to speak. (VERY)
Darren's father	To be able to teach Darren to speak. (FAIRLY)	To teach Darren to speak. (FAIRLY)
Matt's mother	To learn to help Matt cope with his problems. (FAIRLY)	To find ways of helping Matt cope with his problem. (FAIRLY)
Matt's father	To be able to handle behaviour problems. (FAIRLY)	To be able to handle Matt's problems. (FAIRLY)
Chantal's mother	To be able to handle problems we may face in the future. (FAIRLY)	To be able to teach Chantal things. (FAIRLY)
Chantal's father	To be able to help Chantal become independant. (FAIRLY)	To teach Chantal how to become an independant adult. (FAIRLY)
Hannah's mother	To learn effective ways of teaching my child. (FAIRLY)	To learn ways of teaching skills. (FAIRLY)
Hannah's father	To acquire skills for helping Hannah learn basics. (FAIRLY)	To acquire skills enabling me to help Hannah master skills. (FAIRLY)
Steven's mother	To learn ways of teaching Steven to be self-sufficient. (FAIRLY)	Did not fill in.
David's father	To be able to more effectively train my children. (VERY)	To be able to teach skills to my children. (VERY)
Johnny's mother	To be able to help my child more. (FAIRLY)	To be able to help my child. (FAIRLY)

*(either very, fairly or not very.)

APPENDIX L

DETAILS OF INDEPENDENT OBSERVER'S OBSERVATIONS FOR ALL PARENT/CHILD INTERACTIONS -

(i.e. Target and Non-Target Behaviours)

Child's Name: Hannah Objective: To take shirt off.

Child Behaviour	Trial	Degree of Success Mother	Father	Trial	Amount of Attention (as %of trial length) Mother	Father
Pre Intervention	1	2	2	1	78.1	96.3
	2	2	2	2	100.0	100.0
	3	1	2	3	86.4	98.2
	Mean	1.66	2		88.16	98.2
Post Intervention	1	3	3	1	100.0	96.6
	2	3	3	2	100.0	100.0
	Mean	3	3		100.0	98.3

Requests: MOTHER

	Trial	No. of Relevant Requests	No. of Different Requests	% Made When Child Attending	% Clear
Pre Intervention	1	10	0	6	3
	2	7	0	5	7
	3	8	0	5	8
	Mean	8.3		64%	72%
Post Intervention	1	2	0	2	2
	2	1	0	1	1
	Mean	1.5		100%	100%

Hanna (Cont...)

Requests: FATHER

	Trial	No. of Relevant Requests	No. of Different Requests	% Made When Child Attending	% Clear
Pre Inter-vention	1	14	0	12	12
	2	7	2	4	6
	3	10	3	7	7
	Mean	10.3	1.6	74%	81%
Post Inter-vention	1	2	0	2	2
	2	1	0	1	1
	Mean	1.5		100%	100%

T.A. Used MOTHER FATHER

	Trial		Trial	
Pre Inter-vention	1	No	1	No
	2	No	2	No
	3	No	3	No
Post Inter-vention	1	Yes	1	Yes
	2	Yes	2	Yes

Prompts MOTHER FATHER

	Trial	No. of Prompts	% Eff-ective	% Ineff-ective	Trial	No. of Prompts	% Eff-ective	% Ineff-ective
Pre Inter-vention	1	4	1	3	1	4	1	3
	2	5	2	3	2	5	1	4
	3	6	2	4	3	5	2	3
	Mean	5	33%	66%	Mean	4.6	28%	72%
Post Inter-vention	1	2	2	0	1	2	2	0
	2	3	3	0	2	3	2	1
	Mean	2.5	100%	0%	Mean	2.5	80%	20%

Response to Appropriate Behaviour

	MOTHER					FATHER				
	Trial	No. of success	% +ve	% Partial +ve	% No rft (or-ve)	Trial	No. of success	% +ve	% Partial +ve	% No rft
Pre Inter-vention	1	2	2	0	0	1	1	0	1	0
	2	2	2	0	0	2	2	1	0	1
	3	1	1	0	0	3	1	0	1	0
	Mean	1.6	100%			Mean	1.33	25%	50%	25%
Post Inter-vention	1	1	1	0	0	1	2	2	0	0
	2	1	1	0	0	2	3	2	0	0
	Mean	1	100%			Mean	2	100%	0	0

Respnse to Inappropriate Behaviour

	MOTHER			FATHER		
	Trial	Frequency	% Ignored	Trial	Frequency	% Ignored
Pre Inter-vention	1	-	-	1	-	-
	2	-	-	2	-	-
	3	-	-	3	-	-
	Mean	-	-	Mean	-	-
Post Inter-vention	1	-	-	1	-	-
	2	-	-	2	-	-
	Mean	-	-	Mean	-	-

CHILD'S NAME: David OBJECTIVE: Ride a bike

Child Behaviour	Trial	Degree of Success	Trial	Amount of Attention (as % of trial length)
Pre Inter-vention	1	1	1	68.0
	2	1	2	96.3
	3	2	3	78.6
	4	1	4	83.3
	5	1	5	93.0
	6	1	6	75.7
	Mean	1.2	Mean	82.4%
Post Inter-vention	1	5	1	100
	2	5	2	100
	3	5	3	100
	Mean	5	Mean	100%

Requests: FATHER

	Trial	No. of Relevant Requests	No. of Different Requests	% Made When Child Attending	% Clear
Pre Inter-vention	1	3	0	3	3
	2	4	0	3	3
	3	8	3	6	8
	4	3	3	3	3
	5	5	0	5	5
	6	5	5	5	5
	Mean	4.6	1.8	89%	100%
Post Inter-vention	1	1	0	1	1
	2	1	0	1	1
	3	1	0	1	1
	Mean	1	0	100%	100%

T. A. Used FATHER

	Trial	
Pre Inter-vention	1	No
	2	No
	3	No
	4	No
	5	No
	6	No
Post Inter-vention	1	Yes
	2	Yes
	3	Yes

Prompts FATHER

	Trial	No. of Prompts	% Effective	% Ineffective
Pre Inter-vention	1	4	1	3
	2	4	2	2
	3	4	2	2
	4	2	2	0
	5	2	2	0
	6	2	1	1
	Mean	3	56%	44%
Post Inter-vention	1	0	-	-
	2	0	-	-
	3	0	-	-
	Mean	-	-	-

Response to Appropriate Behaviour

FATHER

	Trial	No. of success	% +ve	% partial +ve	% no rft.
Pre Inter-vention	1	1	0	0	1
	2	2	0	0	2
	3	2	0	0	2
	4	2	0	0	2
	5	2	0	0	2
	6	1	0	0	1
	Mean	1.6			100%
Post Inter-vention	1	1	1	0	0
	2	1	1	0	0
	3	1	1	0	0
	Mean	1	100%		

Response to Inappropriate Behaviour

FATHER

	Trial	Frequency	% Ignored
Pre Inter-vention	1	-	-
	2	-	-
	3	-	-
	4	-	-
	5	-	-
	6	-	-
	Mean		
Post Inter-vention	1	-	-
	2	-	-
	3	-	-

CHILD'S NAME: Stephen OBJECTIVE: Undress himself

Child's Behaviour	Trial	Degree of Success	Trial	Amount of Attention (as % of trial length)
Pre Inter-vention	1	2	1	100%
	2	2	2	100%
	3	2	3	100%
	. . .	..		
	Mean	2	Mean	100%
Post Inter-vention	1	2	1	98.4%
	2	2	2	100%
	Mean	2	Mean	99.2%

Requests: MOTHER

	Trial	No. of Relevant Requests	No. of Different Requests	% Made When Child Attending	% Clear
Pre Inter-vention	1	2	0	2	2
	2	1	0	1	1
	3	1	0	1	1
	Mean	1.3			
Post Inter-vention	1	1	0	1	1
	2	1	0	1	1
	Mean	1			

Stephen (Cont...)

Requests

FATHER

	Trial	No. of Relevant Requests	No. of Different Requests	% Made When Child Attending	% Clear
Pre Inter-vention					
	Mean				
Post Inter-vention					
	Mean				

T.A. Used

MOTHER

FATHER

	Trial		Trial	
Pre Inter-vention	1	No		
	2	No		
	3	No		
Post Inter-vention	1	No		
	2	No		

Prompts

		MOTHER				FATHER		
	Trial	No. of Prompts	% Eff-ective	% Ineff-ective	Trial	No. of Prompts	% Eff-ective	% Ineff-ective
Pre Inter-vention	1	12	2	10				
	2	9	6	3				
	3	11	5	6				
	Mean	10.6	41%	59%				
Post Inter-vention	1	5	4	2				
	2	11	4	7				
	Mean	8.5	47%	53%				

Response to Appropriate Behaviour

		MOTHER				FATHER				
	Trial	No. of success	%+ve	% Partial +ve	% No rft (or-ve)	Trial	No. of success	%+ve	% Partial +ve	% No rft (or-ve)
Pre Inter-vention	1	3		1	2					
	2	5	1	3	1					
	3	4	0	1	3					
	Mean	4	8%	42%	50%					
Post Inter-vention	1	6	0	2	4					
	2	4	0	1	3					
	Mean	5	0	30%	70%					

Response to Inappropriate Behaviour

		MOTHER			FATHER	
	Trial	Frequency	% Ignored	Trial	Frequency	% Ignored
Pre Inter-vention	1	0	-			
	2	0	-			
	3	0	-			
	Mean	0	-			
Post Inter-vention	1	0	-			
	2	0	-			
	Mean	0	-			

CHILD'S NAME: John OBJECTIVE: Put his sox on

Child's Behaviour	Trial	Degree of Success MOTHER	Degree of Success FATHER	Trial	Amount of Attention (as % of trial length) MOTHER	Amount of Attention (as % of trial length) FATHER
Pre Inter-vention	1	3	2	1	38.5	83.9
	2	2	2	2	56.5	86.6
	3	3	2	3	85.2	51.3
	4	2	2	4	67.5	57.2
	Mean	2.5	2	Mean	71.5%	69.7%
Post Inter-vention	1	4	3	1	100.0	75.1
	2	4	2	2	100.0	68.7
	3	4	2	3	100.0	59.8
	4	5		4	92.0	
	Mean	4.2	2.3	Mean	98%	67.8%

Requests: MOTHER

	Trial	No. of Relevant Requests	No. of Different Requests	% Made When Child Attending	% Clear
Pre Inter-vention	1	7	4	7	7
	2	13	5	11	13
	3	7	4	7	7
	4	5	4	5	5
	Mean	8	4.1	90.6%	100%
Post Inter-vention	1	1	1	1	1
	2	1	1	1	1
	3	2	0	2	2
	4	1	0	1	1
	Mean	1.25	.5	100%	100%

Requests

FATHER

	Trial	No. of Relevant Requests	No. of Different Requests	% Made When Child Attending	% Clear
Pre Inter-vention	1	9	3	9	9
	2	7	1	7	7
	3	13	2	13	11
	4	15	3	15	13
	Mean	11	2.25	100%	100%
Post Inter-vention	1	6	2	6	6
	2	9	1	9	9
	3	11	3	11	10
	Mean	9.6	2.0	100%	100%

T.A. Used

		MOTHER		FATHER
	Trial		Trial	
Pre Inter-vention	1	No	1	No
	2	No	2	No
	3	No	3	No
	4	No	4	No
Post Inter-vention	1	Yes	1	No
	2	Yes	2	No
	3	Yes	3	No
	4	Yes	4	No

Prompts

		MOTHER				FATHER		
	Trial	No. of Prompts	% Eff-ective	% Ineff-ective	Trial	No. of Prompts	% Eff-ective	% Ineff-ective
Pre Inter-vention	1	3	3	0	1	6	3	3
	2	12	3	9	2	3	2	0
	3	8	6	2	3	7	2	5
	4	6	2	4	4	4	2	0
	Mean	7.25	48%	52%	Mean	5	48%	40%
Post Inter-vention	1	5	4	1	1	7	1	6
	2	3	3	0	2	8	2	6
	3	2	2	0	3	4	2	2
	4	0	-	-	4	4	2	2
	Mean	2.5	90%	10%	Mean	6.3	26%	73%

Response to Appropriate Behaviour

		MOTHER				FATHER			
	Trial	No. of success	%+ve	% Partial +ve	% No rft (or-ve)	Trial	No. of success	%+ve	% Partial +ve	% No rft (or-ve)
Pre Inter-vention	1	2	0	0	2	1	2	0	1	1
	2	2	0	0	2	2	2	0	1	1
	3	2	2	0	0	3	2	0	1	1
	4	2	1	1	0	4	2	1	1	0
	Mean	2	37%	12.5%	50%	Mean	2	12.5%	50%	37%
Post Inter-vention	1	1	1	0	0	1	2	1	1	0
	2	2	1	1	0	2	2	0	1	1
	3	1	0	0	1	3	2	0	1	1
	4	1	1	-	-					
	Mean	1.25	60%	20%	20%	Mean	2	16.6%	50%	33%

Response to Inappropriate Behaviour

	MOTHER			FATHER		
	Trial	Frequency	% Ignored	Trial	Frequency	% Ignored
Pre Inter-vention	1	8	1	1	6	0
	2	7	2	2	3	0
	3	8	4	3	11	1
	4	3	1	4	6	2
	Mean	6.5	30%	Mean	6.5	11%
Post Inter-vention	1	0	-	1	7	1
	2	1	1	2	9	2
	3	10	9	3	6	0
	4	0	-			
	Mean	2.7	90%	Mean	7.3	13.6%

CHILD'S NAME: Chantal OBJECTIVE: Identify 3 coins

		MOTHER	FATHER		MOTHER	FATHER
Child's Behaviour	Trial	Degree of Success		Trial	Amount of Attention (as % of trial length)	
Pre Inter-vention	1	2	1	1	88.7%	100.0%
	2	2	2	2	92.8%	88.6%
	3	1	1	3	92.0%	96.6%
	4	1	2	4	96.7%	94.1%
	5	1	2	5	100.0%	94.3%
	Mean	1.4	1.6	Mean	94.0%	88.7%
Post Inter-vention	1	3	1	1	84.0%	48.0%
	2	4	5	2	100.0%	100.0%
	3	3	5	3	100.0%	100.0%
	4	4		4	100.0%	
	Mean	3.5	3.6	Mean	96.0%	82.6%

Requests: MOTHER

	Trial	No. of Relevant Requests	No. of Different Requests	% Made When Child Attending	% Clear
Pre Inter-vention	1	8	4	8	8
	2	8	3	8	8
	3	10	6	7	10
	4	6	2	6	6
	5	7	2	7	7
	Mean	7.8	3.4	92%	100%
Post Inter-vention	1	1	0	1	1
	2	2	0	2	2
	3	4	2	4	4
	4	1	0	1	1
	Mean	2	0.5	100%	100%

Requests FATHER

	Trial	No. of Relevant Requests	No. of Different Requests	% Made When Child Attending	% Clear
Pre Inter-vention	1	7	4	7	7
	2	8	3	7	7
	3	11	7	10	10
	4	9	8	8	8
	5	8	4	7	8
	Mean	8.6	5.2	90.6%	93.0%
Post Inter-vention	1	5	0	3	5
	2	3	2	3	3
	3	2	0	2	2
	Mean	3.3	0.66	80%	100%

T.A. Used

	MOTHER		FATHER	
	Trial		Trial	
Pre Inter-vention	1	No	1	No
	2	No	2	No
	3	No	3	No
	4	No	4	No
	5	No	5	No
Post Inter-vention	1	Yes	1	Yes
	2	Yes	2	Yes
	3	Yes	3	Yes
	4	Yes		

Prompts

		MOTHER				FATHER		
	Trial	No. of Prompts	% Eff-ective	% Ineff-ective	Trial	No. of Prompts	% Eff-ective	% Ineff-ective
Pre Inter-vention	1	1	0	1	1	3	1	2
	2	1	0	1	2	4	2	2
	3	3	0	3	3	3	0	3
	4	2	1	1	4	2	1	1
	5	3	1	2	5	1	1	0
	Mean	2	20%	80%	Mean	2.6	38%	61.5%
Post Inter-vention	1	3	3	0	1	4	2	2
	2	1	1	0	2	0	-	-
	3	-	-	-	3	0	-	-
	4	-	-	-				
	Mean	1	100%	0	Mean	1.3	50%	50%

Response to Appropriate Behaviour

		MOTHER				FATHER			
	Trial	No. of success	%+ve	% Partial +ve	% No rft (or-ve)	Trial	No. of success	%+ve	% Partial +ve	% No rft (or-ve)
Pre Inter-vention	1	3	2	0	1	1	3	0	0	3
	2	3	3	0	0	2	3	0	0	3
	3	1	0	1	0	3	2	0	0	2
	4	1	1	0	0	4	2	0	2	0
	5	1	1	0	0	5	3	0	3	0
	Mean	1.8	77%	11%	11%	Mean	2.6	0%	39.5%	61.5%
Post Inter-vention	1	1	1	0	0	1	-	0	-	-
	2	1	1	0	0	2	1	1	0	0
	3	2	1	1	0	2	1	1	0	0
	4	1	1	0	0					
	Mean	1.25	80%	20%	0	Mean	0.66	100%	0	0

Chantal (Cont...)

Response to Inappropriate Behaviour

	MOTHER			FATHER		
	Trial	Frequency	% Ignored	Trial	Frequency	% Ignored
Pre Inter-vention	1	0	-	1	0	-
	2	0	-	2	0	-
	3	0	-	3	0	-
	4	0	-	4	0	-
	5	0	-	5	0	-
	Mean	0	-	Mean	0	-
Post Inter-vention	1	0	-	1	0	-
	2	0	-	2	0	-
	3	0	-	3	0	-
	4	0	-			
	Mean	0	-	Mean	0	-

CHILD'S NAME: Chantal OBJECTIVE: Count out a specified number of objects

Child's Behaviour	Trial	Degree of Success MOTHER	Degree of Success FATHER	Trial	Amount of Attention (as % of trial length) MOTHER	Amount of Attention (as % of trial length) FATHER
Pre Intervention	1	3	3	1	100.0	83.3
	2	3	3	2	91.3	95.0
	3	3	3	3	91.0	98.5
	4	3	3	4	95.5	95.0
	5	3	3	5	100.0	82.9
	Mean	3	3	Mean	95.4	90.94
Post Intervention	1	4	5	1	100.0	100.0
	2	3	5	2	96.0	100.0
	3	4	5	3	97.0	89.0
	4	5	1	4	100.0	77.0
	Mean	4	4	Mean	98.25	91.5

Requests: MOTHER

	Trial	No. of Relevant Requests	No. of Different Requests	% Made When Child Attending	% Clear
Pre Intervention	1	7	3	7	100
	2	4	2	4	100
	3	6	3	6	100
	4	5	3	5	100
	5	4	2	4	100
	Mean	5.2	2.6	100%	100%
Post Intervention	1	1	0	1	100
	2	2	0	2	100
	3	1	0	1	100
	4	1	0	1	100
	Mean	1.25	0	100%	100%

Requests FATHER

	Trial	No. of Relevant Requests	No. of Different Requests	% Made When Child Attending	% Clear
Pre Inter-vention	1	5	2	4	100
	2	7	3	7	100
	3	10	4	10	100
	4	10	3	9	100
	5	12	3	12	100
	Mean	8.8	3	95.4%	100%
Post Inter-vention	1	1	0	1	1
	2	1	0	1	1
	3	5	0	4	5
	4	10	0	9	10
	Mean	4.2	0	88.2%	100%

T.A. Used

	MOTHER		FATHER	
	Trial		Trial	
Pre Inter-vention	1	No	1	No
	2	No	2	No
	3	No	3	No
	4	No	4	No
	5	No	5	No
Post Inter-vention	1	Not Needed	1	No
	2	Not Needed	2	No
	3	Not Needed	3	No
	4	Not Needed	4	No

Prompts

		MOTHER				FATHER		
	Trial	No. of Prompts	% Effective	% Ineffective	Trial	No. of Prompts	% Effective	% Ineffective
Pre Intervention	1	3	0	3	1	1	0	1
	2	4	2	2	2	3	1	2
	3	2	1	1	3	8	4	4
	4	1	1	0	4	8	3	5
	5	4	0	4	5	6	3	3
	Mean	2.8	28.5	71.4	Mean	5.2	42.3	57.7
Post Intervention	1	0	-	-	1	0	-	-
	2	1	100		2	0	-	-
	3	2	100		3	0	-	-
	4	0	-	-	4	0	-	-
	Mean	0.6	100%	0	Mean	0	-	-

Response to Appropriate Behaviour

		MOTHER					FATHER			
	Trial	No. of success	%+ve	% Partial +ve	% No rft (or-ve)	Trial	No. of success	%+ve	% Partial +ve	% No rft (or-ve)
Pre Intervention	1	1	1	0	0	1	1	0	1	0
	2	1	0	1	0	2	2	0	1	1
	3	1	0	0	1	3	1	0	0	1
	4	1	1	0	0	4	3	0	1	2
	5	1	0	0	1	5	1	0	0	1
	Mean	1	40%	20%	40%	Mean	1.6	0%	37.5%	62.5%
Post Intervention	1	1	100			1	1	0	1	0
	2	1	100			2	1	1	0	0
	3	1	100			3	1	0	1	0
	4	1	100			4	0	-	-	-
	Mean	1	100%	0	0	Mean	3	33%	66%	-

Response to Inappropriate Behaviour

		MOTHER			FATHER	
	Trial	Frequency	% Ignored	Trial	Frequency	% Ignored
Pre Inter-vention	1	0	-	1	0	-
	2	0	-	2	0	-
	3	0	-	3	0	-
	4	0	-	4	0	-
	5	0	-	5	0	0
	Mean	0	-	Mean	0	-
Post Inter-vention	1	0	-	1	0	-
	2	0	-	2	0	-
	3	0	-	3	1	1
	4	0	-	4	6	6
	Mean	0	-	Mean	1.75	100%

CHILD'S NAME: Paul

OBJECTIVE: Pre :Draw a Maze
Post:Draw lines

Child's Behaviour	Trial	Degree of Success MOTHER	Degree of Success FATHER	Trial	Amount of Attention (as % of trial length) MOTHER	Amount of Attention (as % of trial length) FATHER
Pre Inter-vention	1	1	1	1	100	95
	2	1	1	2	97	100
	3	1	1	3	100	96.9
	4	1	1	4	81	
	5	1	1	5	93	100
	Mean	1	1	Mean	94.2%	97.7%
Post Inter-vention	1	3	3	1	100	100
	2	1	1	2	82	100
	3	3	1	3	100	100
	4	2	3	4	100	95
	Mean	2.25	2	Mean	95.5%	98.7%

Requests: MOTHER

	Trial	No. of Relevant Requests	No. of Different Requests	% Made When Child Attending	% Clear
Pre Inter-vention	1	1	0	1	1
	2	1	0	1	1
	3	1	0	1	1
	4	4	3	4	4
	5	3	3	1	3
	Mean	2	1.2	80%	100%
Post Inter-vention	1	2	2	2	2
	2	2	0	2	2
	3	2	0	2	2
	4	2	0	2	2
	Mean	2	0.5	100%	100%

Requests FATHER

	Trial	No. of Relevant Requests	No. of Different Requests	% Made When Child Attending	% Clear
Pre Inter-vention	1	1	0	1	1
	2	2	2	2	2
	3	2	2	2	0
	4	2	2	2	1
	Mean	2	1.2	100%	57%
Post Inter-vention	1	1	0	1	1
	2	2	0	2	0
	3	1	0	1	1
	4	3	0	3	3
	Mean	1.75	0.5	100%	71%

T.A. Used

		MOTHER		FATHER
	Trial		Trial	
Pre Inter-vention	1	No	1	No
	2	No	2	No
	3	No	3	No
	4	No	4	No
	5	No	5	No
Post Inter-vention	1	No	1	Yes
	2	No	2	Yes
	3	Yes	3	Yes
	4	Yes	4	Yes

Prompts

		MOTHER				FATHER		
	Trial	No. of Prompts	% Effective	% Ineffective	Trial	No. of Prompts	% Effective	% Ineffective
Pre Intervention	1	5	1	4	1	2	0	2
	2	7	3	4	2	6	2	4
	3	4	1	3	3	5	2	3
	4	5	2	3	4	2	0	2
	5	5	1	4				
	Mean	5.2	30.7%	69.3%	Mean	3.75	26.6%	73.3%
Post Intervention	1	4	4	0	1	2	2	0
	2	2	2	0	2	2	0	2
	3	3	2	1	3	1	0	1
	4	1	1	0	4	2	1	1
	Mean	2.5	90%	100%	Mean	1.75	42.8%	58.2%

Response to Appropriate Behaviour

		MOTHER				FATHER				
	Trial	No. of success	%+ve	% Partial +ve	% No rft (or-ve)	Trial	No. of success	%+ve	% Partial +ve	% No rft (or-ve)
Pre Intervention	1	0	-	-	-	1	1	0	0	1
	2	1	0	1	0	2	1	0	0	1
	3	1	0	0	1	3	1	0	0	1
	4	1	0	1	0	4	1	0	0	1
	5	0	-	-	-					
	Mean	0.6	0	66%	33%	Mean	1	0	0	100%
Post Intervention	1	1	0	0	1	1	1	0	0	1
	2	0	-	-	-	2	0	-	-	-
	3	1	0	0	1	3	0	-	-	-
	4	2	2	0	0	4	2			
	Mean	1	50%		50%	Mean	0.75	0	0	100%

Paul (Cont...)

Response to Inappropriate Behaviour

		MOTHER			FATHER	
	Trial	Frequency	% Ignored	Trial	Frequency	% Ignored
Pre Inter-vention	1	-	-	1	-	-
	2	-	-	2	-	-
	3	-	-	3	-	-
	4	-	-	4	-	-
	5	-	-			
	Mean	-	-	Mean	-	-
Post Inter-vention	1	0	-	1	-	-
	2	0	-	2	-	-
	3	-	-	3	-	-
	4	0	-	4	-	-
	Mean		-	Mean	-	-

CHILD'S NAME: Paul OBJECTIVE: Count 6 blocks

Child's Behaviour	Trial	Degree of Success MOTHER	Degree of Success FATHER	Trial	Amount of Attention (as % of trial length) MOTHER	Amount of Attention (as % of trial length) FATHER
Pre Inter-vention	1	1	1	1	90.1	100
	2	1	1	2	69.3	100
	3	1	1	3	75.6	87.1
	4	1	1	4	97.5	100
	Mean	1	1	Mean	83.1%	96.7%
Post Inter-vention	1	3	1	1	97.2	100
	2	2	2	2	85.7	100
	3	4	2	3	100	100
	4	4	1	4	100	91.6
	5	4		5	100	
	Mean	17	1.5	Mean	96.5%	97.9%

Requests: MOTHER

	Trial	No. of Relevant Requests	No. of Different Requests	% Made When Child Attending	% Clear
Pre Inter-vention	1	3	3	3	3
	2	8	3	6	6
	3	2	1	2	2
	4	3	3	2	2
	Mean	4	2.5	81.2%	81.2%
Post Inter-vention	1	1	0	1	1
	2	1	0	1	1
	3	1	0	1	1
	4	1	0	1	1
	5	1	0	1	1
	Mean	1	0	100%	100%

Paul (Cont...)

Requests

FATHER

	Trial	No. of Relevant Requests	No. of Different Requests	% Made When Child Attending	% Clear
Pre Inter-vention	1	2	2	2	2
	2	2	2	2	2
	3	4	3	4	4
	4	2	1	2	2
	Mean	2.5	2	100%	100%
Post Inter-vention	1	1	0	1	1
	2	2	0	2	2
	3	1	0	1	1
	4	1	0	1	1
	Mean	1	0	100%	100%

T.A. Used

	MOTHER		FATHER	
	Trial		Trial	
Pre Inter-vention	1	No	1	No
	2	No	2	No
	3	No	3	No
	4	No	4	NO
	5	No		
Post Inter-vention	1	No	1	No
	2	No	2	No
	3	No	3	NO
	4	No	4	NO
	5	No		

Prompts

	Trial	MOTHER No. of Prompts	% Effective	% Ineffective	Trial	FATHER No. of Prompts	% Effective	% Ineffective
Pre Intervention	1	5	2	3	1	0	-	-
	2	4	1	3	2	1	0	1
	3	5	2	3	3	1	0	1
	4	3	1	2	4	1	1	-
	Mean	4.25	35%	64%	Mean	0.75	33%	66%
Post Intervention	1	2	2	0	1	1	0	1
	2	3	2	1	2	2	1	1
	3	1	1	0	3	0	-	-
	4	1	1	0	4	1	1	0
	5	1	1	0				
	Mean	1.6	87%	13%	Mean	1	50%	50%

Response to Appropriate Behaviour

	Trial	MOTHER No. of success	%+ve	% Partial +ve	% No rft (or-ve)	Trial	FATHER No. of success	%+ve	% Partial +ve	% No rft (or-ve)
Pre Intervention	1	2	0	2	0	1	0	-	-	-
	2	0	-	-	-	2	0	-	-	-
	3	0	-	-	-	3	0	-	-	-
	4	1	0	0	1	4	1	0	0	0
	Mean	0.75		66%	33%	Mean	0.25	0	0	100%
Post Intervention	1	2	0	1	1	1	0	-	-	-
	2	1	0	0	1	2	1	0	0	1
	3	1	1	0	0	3	1	0	0	1
	4	1	1	0	0	4	0	-	-	-
	5	1	1	0	0					
	Mean	1.2	50%	16%	34%	Mean	0.5	0	0	100%

Response to Inappropriate Behaviour

	MOTHER			FATHER		
	Trial	Frequency	% Ignored	Trial	Frequency	% Ignored
Pre Inter-vention	1	-	-	1	-	-
	2	-	-	2	-	-
	3	-	-	3	-	-
	4	-	-	4	-	-
	Mean	-	-	Mean	-	-
Post Inter-vention	1	-	-	1	-	-
	2	-	-	2	-	-
	3	-	-	3	-	-
	4	-	-	4	-	-
	5	-	-			
	Mean	-	-	Mean	-	-

CHILD'S NAME: Darren

OBJECTIVE: Pre: Will label 5 objects
Post: Will identify card

Child's Behaviour	Trial	MOTHER Degree of Success	FATHER Degree of Success	Trial	MOTHER Amount of Attention (as % of trial length)	FATHER Amount of Attention (as % of trial length)
Pre Inter-vention	1	1	1	1	34.7	38.1
	2	1	1	2	66.6	24.1
	3	1	1	3	51.0	27.5
	4	1	1	4	42.0	31.6
	5	1	1	5	59.3	
	Mean	1	1	Mean	50.72%	30.32%
Post Inter-vention	1	3	3	1	89.2	69.8
	2	4	3	2	97.4	58.4
	3	4		3	87.9	
	Mean	3.6	3	Mean	91.5	64.1

Requests: MOTHER

	Trial	No. of Relevant Requests	No. of Different Requests	% Made When Child Attending	% Clear
Pre Inter-vention	1	16	6	4	16
	2	14	7	7	14
	3	7	6	5	7
	4	6	4	3	6
	5	16	9	7	16
	Mean	11.8	6.4	44.1%	100%
Post Inter-vention	1	11	1	8	11
	2	5	0	5	5
	3	5	0	5	5
	Mean	7	0.66	85.7%	100%

Darren (Cont...)

Requests

FATHER

	Trial	No. of Relevant Requests	No. of Different Requests	% Made When Child Attending	% Clear
Pre Inter-vention	1	16	4	9	16
	2	13	5	5	13
	3	13	4	4	13
	4	17	5	9	17
	Mean	14.7	4.5	45.7%	100%
Post Inter-vention	1	10	1	10	10
	2	8	2	7	8
	Mean	9	1.5	94%	100%

T.A. Used

		MOTHER		FATHER
	Trial		Trial	
Pre Inter-vention	1	No	1	No
	2	No	2	No
	3	No	3	No
	4	No	4	No
	5	No	5	No
Post Inter-vention	1	Yes	1	Yes
	2	Yes	2	Yes
	3	Yes		

Prompts

		MOTHER				FATHER		
	Trial	No. of Prompts	% Eff-ective	% Ineff-ective	Trial	No. of Prompts	% Eff-ective	% Ineff-ective
Pre Inter-vention	1	12	0	12	1	16	0	16
	2	19	1	18	2	16	0	16
	3	15	0	15	3	12	0	12
	4	20	0	20	4	11	0	11
	5	14	0	14				
	Mean	16	1%	99%	Mean	13.75	0	100%
Post Inter-vention	1	6	5	1	1	4	4	-
	2	3	3	0	2	6	6	-
	3	4	4	0				
	Mean	4.3	92.3%	7.7%	Mean	5	100%	0%

Response to Appropriate Behaviour

		MOTHER				FATHER			
	Trial	No. of success	%+ve	% Partial +ve	% No rft (or-ve)	Trial	No. of success	%+ve	% Partial +ve	% No rft (or-ve)
Pre Inter-vention	1	0	-	-	-	1	2	0	0	2
	2	3	0	1	2	2	0	-	-	-
	3	1	0	0	1	3	0	-	-	-
	4	0	-	-	-	4	0	-	-	-
	5	0	-	-	-					
	Mean	0.8	0	25%	75%	Mean	0.5	0	0	100%
Post Inter-vention	1	5	5	0	0	1	5	5		
	2	5	5	0	0	2	5	5		
	3	5	5	0	0					
	Mean	5	100%	0%	0%	Mean	5	100%	0%	0%

Response to Inappropriate Behaviour

	MOTHER			FATHER		
	Trial	Frequency	% Ignored	Trial	Frequency	% Ignored
Pre Inter-vention	1	15	15	1	12	12
	2	12	12	2	3	3
	3	13	13	3	10	10
	4	7	5	4	11	11
	5	7	7			
	Mean	10.8	96.2%	Mean	8	100%
Post Inter-vention	1	4	4	1	1	1
	2	0	-	2	4	4
	3	2	2			
	Mean	3	100%	Mean	2.5	100%

CHILD'S NAME: Darren OBJECTIVE: Will obey 3 commands

Child's Behaviour	Trial	Degree of Success MOTHER	Degree of Success FATHER	Trial	Amount of Attention (as % of trial length) MOTHER	Amount of Attention (as % of trial length) FATHER
Pre Inter-vention	1	3	3	1	52.6	25.0
	2	4	3	2	47.2	45.1
	3	3	3	3	66.6	40.0
	4	2	2	4	22.3	29.0
	5	3	2	5	65.5	47.0
	6	3	2	6	71.4	27.1
	7	3		7	38.9	
	Mean	3	2.5	Mean	52.1%	35.5%
Post Inter-vention	1	5	4	1	100.0	90.0
	2	5	4	2	100.0	68.1
	3	5	4	3	93.8	75.6
	Mean	5	4	Mean	97.9%	77.9%

Requests: MOTHER

	Trial	No. of Relevant Requests	No. of Different Requests	% Made When Child Attending	% Clear
Pre Inter-vention	1	18	2	10	18
	2	21	0	10	21
	3	8	0	4	8
	4	27	0	7	25
	5	17	5	5	17
	6	14	3	6	14
	7	23	3	7	23
	Mean	18.2	1.8	37.5%	98.4%
Post Inter-vention	1	5	0	5	5
	2	5	0	5	5
	3	6	0	6	6
	Mean	5.3	0	100%	100%

Requests

FATHER

	Trial	No. of Relevant Requests	No. of Different Requests	% Made When Child Attending	% Clear
Pre Inter-vention	1	16	4	4	16
	2	14	2	6	14
	3	6	0	3	6
	4	11	2	5	11
	5	11	0	5	11
	6	21	4	6	21
	Mean	13.16	2	36%	100%
Post Inter-vention	1	5	1	4	5
	2	6	0	4	6
	3	6	1	5	6
	Mean	5.6	0.66	76.4%	100%

T.A. Used

	MOTHER		FATHER	
	Trial		Trial	
Pre Inter-vention	1	No	1	No
	2	No	2	No
	3	No	3	No
	4	No	4	No
	5	No	5	No
	6	No	6	No
	7	No		
Post Inter-vention	1	No	1	No
	2	No	2	No
	3	No	3	No

Prompts

		MOTHER				FATHER		
	Trial	No. of Prompts	% Eff-ective	% Ineff-ective	Trial	No. of Prompts	% Eff-ective	% Ineff-ective
Pre Inter-vention	1	4	2	1	1	2	2	0
	2	5	3	2	2	7	3	4
	3	4	3	1	3	3	3	0
	4	9	1	8	4	4	3	1
	5	3	3	0	5	3	3	0
	6	3	3	0	6	3	3	0
	7	3	3	0				
	Mean	4.4	61%	39%	Mean	3.6	77%	23%
Post Inter-vention	1	0	-	-	1	1	1	0
	2	0	-	-	2	2	2	0
	3	0	-	-	3	1	1	0
	Mean	0	-	-	Mean	1.3	100%	0%

Response to Appropriate Behaviour

		MOTHER				FATHER			
	Trial	No. of success	%+ve	% Partial +ve	% No rft (or-ve)	Trial	No. of success	%+ve	% Partial +ve	% No rft (or-ve)
Pre Inter-vention	1	3	0	1	2	1	2	0	0	2
	2	3	0	1	2	2	3	0	1	2
	3	3	1	0	2	3	3	0	2	1
	4	1	1	0	0	4	3	0	0	3
	5	3	1	2	0	5	3	0	0	3
	6	3	1	1	1	6	3	0	0	3
	7	3	0	1	2					
	Mean	2.7	21%	32%	47%	Mean	3	0	17.6%	73.6%
Post Inter-vention	1	3	1	1	1	1	3	3	0	0
	2	3	1	1	1	2	3	3	0	0
	3	3	2	1	0	3	3	3	0	0
	Mean	3	44%	33%	22%	Mean	3	100%	0%	0%

Darren (Cont...)

Response to Inappropriate Behaviour

		MOTHER			FATHER	
	Trial	Frequency	% Ignored	Trial	Frequency	% Ignored
Pre Inter-vention	1	4	4	1	3	3
	2	8	8	2	7	7
	3	3	3	3	4	3
	4	12	12	4	6	5
	5	3	3	5	8	7
	6	0	0	6	12	12
	7	2	1			
	Mean	4.5	96%	Mean	6.6	92%
Post Inter-vention	1	3	3	1	1	1
	2	0	-	2	2	2
	3	0	-	3	0	-
	Mean	1	100%	Mean	1	100%

CHILD'S NAME: Matthew OBJECTIVE: Will eat quietly at the dinner table.

	MOTHER		FATHER	
	Trial	Amount of Attention (as % of trial)	Trial	Amount of Attention (as % of trial)
Pre Inter-vention	1	51.0	1	75
	2	24.2	2	74
	3	39.2	3	17
	4	65.6	4	74
	Mean	45.0%	Mean	60%
Post Inter-vention	1	93.4	1	88
	2	98.8	2	87
	3	99.2	3	100
	4	54.0	4	100
	5	52.0		
	Mean	79.48%	Mean	93.7%

	MOTHER				FATHER			
	INAPPROPRIATE BEHAVIOUR							
	Trial	Duration (%of trial)	Freq-ency	% Ignored	Trial	Duration (%of trial)	Freq-ency	% Ignored
Pre Inter-vention	1	49.0	4	1	1	25	3	2
	2	75.8	4	1	2	26	4	2
	3	60.8	5	1	3	83	4	0
	4	44.4	3	0	4	26	3	1
	Mean	57.5	4	25%	Mean	40%	3.5	35.7%
Post Inter-vention	1	6.6	1	1	1	22	3	2
	2	1.2	1	1	2	23	4	3
	3	0.8	1	1	3	0	0	-
	4	46.0	1	1	4	0	0	-
	5	48.0	5	4				
	Mean	20.5%	1.8	88.8%	Mean	11.2%	1.7	71.4%

	MOTHER					
	REQUESTS FOR CO-OPERATION					
	Trial	No. of Relevant Requests	No. of Co-operation (% of R)	% +ve Attention to Co-op.	No. of Unco-op (%)	% Ignored Unco-op
Pre Inter-vention	1	3	-	-	3	0
	2	3	1	0	2	0
	3	2	1	0	1	0
	4	2	1	0	1	1
	Mean	2.5	30%	0	70%	14.2%
Post Inter-vention	1	-	-	-	1	1
	2	-	-	-	-	-
	3	1	1	1	-	-
	4	2	1	1	1	0
	5	5	-	-	1	0
	Mean	2.2	22%	100%	77.7%	14.2%

	FATHER					
	REQUESTS FOR CO-OPERATION					
	Trial	No. of Relevant Requests	No. of Co-operation (% of R)	% +ve Attention to Co-op.	No. of Unco-op. (%)	% Ignored Unco-op.
Pre Inter-vention	1	1	1	1	-	-
	2	3	-	-	3	3
	3	3	-	-	3	3
	4	-	-	-	-	-
	Mean	2.3	14.2%	100%	85.7%	100%
Post Inter-vention	1	2	2	0	-	-
	2	1	1	1	-	-
	3	-	-	-	-	-
	4	-	-	-	-	-
	Mean	1.5	100%	33%	-	-

APPENDIX M

OBJECTIVE BEHAVIOUR CHANGE SCORES

Parent O.B.C.S. = x/n

where $x = \left(\frac{\text{B-A change observed}}{\text{maximum possible change from S's baseline.}} \right)$

$X = x_1$ - No. of relevant requests

x_2 - No. of different requests

x_3 - % of requests when child attending

x_4 - % of clear requests

x_5 - % of effective prompts

x_6 - % of positive repriment to appropriate behaviour

x_7 - % of inappropriate behaviour ignored

TARGET BEHAVIOURS

Darren's Mother	x_1 B A	x_2 B A	x_3 B A	x_4 B A	x_5 B A	x_6 B A	x_7 B A
	7-11.8	.66-6.4	44.1-85.7	100-100	1-92	0-100	96-100
Obtained O.D. Difference	4.8	5.8	41	0	91	100	4
Max. possible Diff. M.P.D.	10.8	6.4	66	0	99	100	4
$\frac{(\text{OD})}{(\text{M.P.D.})}$	44%	91%	62%	-	92%	100%	100%
		O.B.C.S. = 44 + 91 + 62 + 92 +100 + 100/6 = 81.5%					

Darren's Father	x_1 B A	x_2 B A	x_3 B A	x_4 B A	x_5 B A	x_6 B A	x_7 B A
	14.7-9	4.5-1.5	45.7-94	100-100	0-100	0-100	100-100
Obtained O.D. Difference	5.7	3	48.3	0	100	100	0
Max. possible Diff. M.P.D.	13.7	4.5	54.3	0	100	100	0
$\frac{(\text{O.D.})}{(\text{M.P.D.})}$	41	66	89		100	100	
			O.B.C.S.	= 79.2			

Chantal's Mother	x_1 B A	x_2 B A	x_3 B A	x_4 B A	x_5 B A	x_6 B A	x_7 B A
	7.8-2	3.4-.5	92-100	100-100	20-100	77-80	100-100
Obtained O.D. Difference	5.8	2.9	8	0	80	3	0
Max. possible Diff. M.P.D.	6.8	3.4	8	0	80	23	0
$\frac{(\text{O.D.})}{(\text{M.P.D.})}$	85	85	100	-	100	13	-
			O.B.C.S.	= 76.6			

Chantal's Father	x_1 B A	x_2 B A	x_3 B A	x_4 B A	x_5 B A	x_6 B A	x_7 B A
	8.6-3	5.2-.6	90-80.6	93-100	35-50	0-100	-
Obtained O.D. Difference	5.6	4.6	-9.4	7	15	100	-
Max. possible Diff. M.P.D.	7.6	5.2	-90	7	65	100	-
$\frac{(\text{O.D.})}{(\text{M.P.D.})}$	73.6	88.4	-10	100	23	100	-
			O.B.C.S.	= 62.5			

Paul's Mother	x_1 B A	x_2 B A	x_3 B A	x_4 B A	x_5 B A	x_6 B A	x_7 B A
	2 - 2	1.2-.5	80-100	100-100	30.9-90	0-50	-
Obtained O.D. Difference	0	.7	20	0	59.1	50	-
Max. possible Diff. M.P.D.	1	1.2	20	0	69.1	100	-
$\frac{(\text{O.D.})}{(\text{M.P.D.})}$	0	58	100	-	85	50	-
O.B.C.S. = 58.6							

Paul's Mother	x_1 B A	x_2 B A	x_3 B A	x_4 B A	x_5 B A	x_6 B A	x_7 B A
	4-1	2.5-0	100-85	57-71	26-42	0-0	-
Obtained O.D. Difference	3	2.5	-15	14	16	0	-
Max. possible Diff. M.P.D.	3	2.5	-100	43	74	100	-
$\frac{(\text{O.D.})}{(\text{M.P.D.})}$	100	100	-15	32.5	21	0	-
O.B.C.S. = 39.7							

Stephen's Mother	x_1 B A	x_2 B A	x_3 B A	x_4 B A	x_5 B A	x_6 B A	x_7 B A
	1.3-1	0-0	100-100	100-100	41-47	8-0	-
Obtained O.D. Difference	.3	-	-	-	6	-8	-
Max. possible Diff. M.P.D.	.3	-	-	-	59	-8	-
$\frac{(\text{O.D.})}{(\text{M.P.D.})}$	100	-	-	-	10	-100	-
O.B.C.S. = 3.3							

David's Father	x_1 B A	x_2 B A	x_3 B A	x_4 B A	x_5 B A	x_6 B A	x_7 B A
	4.6-1	1.8-0	89-100	100-100	-	0-100	-
Obtained O.D. Difference	3.6	1.8	11	0	-	100	-
Max. possible Diff. M.P.D.	3.6	1.8	11	-	-	100	-
$\frac{(\text{O.D.})}{(\text{M.P.D.})}$	100	100	100	-	-	100	-
O.B.C.S. = 100							

Hanna's Mother	x_1 B A	x_2 B A	x_3 B A	x_4 B A	x_5 B A	x_6 B A	x_7 B A
	8.3-1.5	0-0	64-100	72-100	33-100	100-100	-
Obtained O.D. Difference	6.8	-	36	28	67	0	-
Max. possible Diff. M.P.D.	7.3	-	36	28	67	0	-
$\frac{(\text{O.D.})}{(\text{M.P.D.})}$	93	-	100	100	100	-	-
O.B.C.S. = 98.2							

Hanna's Father	x_1 B A	x_2 B A	x_3 B A	x_4 B A	x_5 B A	x_6 B A	x_7 B A
	10.3-.5	1.6-0	74-100	81-100	28-80	25-100	-
Obtained O.D. Difference	8.8	1.6	26	19	52	75	-
Max. possible Diff. M.P.D.	9.3	1.6	26	19	72	75	-
$\frac{(\text{O.D.})}{(\text{M.P.D.})}$	94.6	100	100	100	72	100	-
O.B.C.S. = 94.4							

Johnny's Mother	x_1 B A	x_2 B A	x_3 B A	x_4 B A	x_5 B A	x_6 B A	x_7 B A
	8-1.25	4.1-.5	92.6-100	100-100	48-90	37-60	30-90
Obtained O.D. Difference	6.75	3.6	7.4	0	42	23	60
Max. possible Diff. M.P.D.	4	4.1	7.4	0	52	63	70
$\frac{(\text{O.D.})}{(\text{M.P.D.})}$	96	87.8	100	-	80.7	36.5	85.7
O.B.C.S. = 81.1							

Johnny's Father	x_1 B A	x_2 B A	x_3 B A	x_4 B A	x_5 B A	x_6 B A	x_7 B A
	11-9.6	2.2-2	100-100	100-100	60-26	12.5-16.6	11-13.6
Obtained O.D. Difference	1.4	.2	0	0	-34	4.1	2.6
Max. possible Diff. M.P.D.	10	2.2	0	0	-60	87.5	89
$\frac{(\text{O.D.})}{(\text{M.P.D.})}$	14	9.1	0	0	-56	4	2.9
O.B.C.S. = -26							

Matt's Mother	x_1 (Amount of inappropiate Behaviour) B A	x_2 (Amount of appropriate beh. +vely rft) B A	x_3 (Amount of Uncooperation ignored) B A
	25-88	0-100	14.2-14.2
Obtained Difference	63	100	0
Max. possible Difference	75	100	85.8
$\frac{(\text{O.D.})}{(\text{M.P.D.})}$	84	100	0
	O.B.C.S. = 61.3		

Matt's Father	x_1 (Amount of inappropriate Beh.) B A	x_2 (Amount of appropriate beh.+vely rft) B A	x_3 (Amount of unco-operation ignored) B A
	35 - 74	100 - 33	0 - 100
Obtained Difference	39	-67	0
Max. possible Difference	65	-100	0
$\frac{(\text{O.D.})}{(\text{M.P.D.})}$	60	-67	100
	O.B.C.S. = 31		

GENERALIZATION SCORES

(i.e. Non-target behaviours)

Darren's Mother	x_1	x_2	x_3	x_4	x_5	x_6	x_7
	18.2-5.3	1.8-0	37.5-100	98-100	61--	21-44	96-100
Obtained O.D. Difference	12.9	1.8	62.5	2	-	23	4
Max. possible Diff. M.P.D.	17.2	1.8	62.5	2	-	79	4
$\frac{(\text{IMP})}{(\text{POSS.I})}$ %	75%	100%	100%	100%	-	29%	100%
O.B.C.S. = 84%							

Darren's Father	x_1	x_2	x_3	x_4	x_5	x_6	x_7
	13.1-5.6	2-.66	36-76.4	100-100	77-100	0-100	92-100
Obtained O.D. Difference	7.4	1.34	40.4	-	23	100	8
Max. possible Diff. M.P.D.	12.1	2	64	-	23	100	8
$\frac{(\text{IMP})}{(\text{POSS.I})}$ %	61%	67%	63%	-	100%	100%	100%
O.B.C.S. = 81.8%							

Chantal's Mother	x_1	x_2	x_3	x_4	x_5	x_6	x_7
	5.2-1.2	2.6-0	100-100	100-100	28.5-100	40-100	-
Obtained O.D. Difference	4	2.6	-	-	71.5	60	-
Max. possible Diff. M.P.D.	4.2	2.6	-	-	71.5	60	-
$\frac{(\text{IMP})}{(\text{POSS.I})}$ %	100%	100%			100%	100%	
O.B.C.S. = 100%							

Chantal's Father	x_1	x_2	x_3	x_4	x_5	x_6	x_7
	8.8 - 4.2	3.0-9.5	5.4-88.2	100-100	42-0	0-33	0-100
Obtained O.D. Difference	4.6	3	-7.2	-	-42	33	100
Max. possible Diff. M.P.D.	7.8	3	-95.4	-	-42	100	100
$\frac{(\text{IMP})}{(\text{POSS.I})}$ %	58%	100%	7%	-	-100%	33%	100%
O.B.C.S. = 33%							

Paul's Mother	x_1	x_2	x_3	x_4	x_5	x_6	x_7
	1.75-1.75	1.5-0	81.5-100	81.2-100	35-87	0-50	-
Obtained O.D. Difference	0	1.5	19	19	52	50	-
Max. possible Diff. M.P.D.	.75	1.5	19	19	65	100	-
$\frac{(\text{IMP})}{(\text{POSS.I})}$ %	0	100 %	100%	100%	80%	50%	-
O.B.C.S. = 71.6							

Paul's Father	x_1	x_2	x_3	x_4	x_5	x_6	x_7
	2.5-1	2-0	100-100	100-100	33-50	0-0	--
Obtained O.D. Difference	1.5	2	0	0	17	0	-
Max. possible Diff. M.P.D.	1.5	2	0	0	66	100	-
$\frac{(\text{IMP})}{(\text{POSS.I})}$%	100%	100%	-	-	26%	0%	-
O.B.C.S. = 56.5%							

APPENDIX N

COMPARISONS BETWEEN CHILD'S SUCCESS RATING AND PARENTS BEHAVIOUR, FOR EACH TRIAL.

Child Success Rating Scale

1 - Totally unsuccessful

2 - Successfully completes some bit of task, but needs prompts.

3 - Approximately completes all task, but needs prompts.

4 - Successfully completes all of task, but needs prompts.

5 - Totally successful - needs no prompts.

Parent Behaviour - to be examined for each trial.

(a) No. of S.D.'s when child attending as a percent of total no. of S.D.'s.

(b) No. of effective prompts as a percent of total no. of prompts.

(c) No. of contingent positive rft. as a percent of total no. of success.

Parent Behaviour = Average of the 3 percents for each trial.

Hanna/Mother	Mother's Behaviour	Child's Success
Baseline - Trial 1	60 + 25 + 100 = 61.6	2
2	71 + 40 + 100 = 70.3	2
3	63 + 33 + 100 = 65.3	1
Part I - Trail 1	100 + 100 + 100 = 100	3
2	100 + 100 + 100 = 100	3

Hanna/Father	Father's Behaviour	Child's Success
Baseline - Trial 1	86 + 25 + 0 = 37	2
2	57 + 20 + 50 = 42.3	2
3	70 + 40 + 0 = 36.6	2
Part I - Trail 1	100 + 100 + 100 = 100	3
2	100 + 66 + 100 = 88.6	3

Johnny/Mother	Mother's Behaviour	Child's Success
Baseline - Trial 1	100 + 0 + 100 = 66.6	3
2	85 + 0 + 25 = 36.6	2
3	86 + 100 + 75 = 87	3
4	100 + 50 + 66 = 72	2
Part I - Trial 1	100 + 100 + 80 = 93	4
2	100 + 50 + 100 = 83.3	4
3	100 + 70 + 100 = 90	4
4	100 + 100 + - = 100	5

David/Father	Father's Behaviour	Child's Success
Baseline - Trial 1	100 + 25 + 0 = 41.6	1
2	75 + 50 + 0 = 41.6	1
3	75 + 50 + 0 = 41.6	2
4	100 + 100 + 0 = 66.6	1
5	100 + 100 + 0 = 66.6	1
6	100 + 50 + 0 = 50	1
Post Intervention - Trial 1	100 + - + 100 = 100	5
2	100 + - + 100 = 100	5
3	100 + - + 100 = 100	5

Steven/Mother	Mother's Behaviour	Child's Success
Baseline - Trial 1	100 + 16.6 + 0 = 58.3	2
2	100 + 66.6 + 20 = 62.2	2
3	100 + 45.4 + 0 = 48.5	2
Post Intervention - Trial 1	100 + 80 + 0 = 60	2
2	100 + 36.3 + 0 = 45.3	2

Johnny/Father	Father's Behaviour	Johnny
Baseline - Trial 1	100 + 50 + 0 = 50	2
2	100 + 66 + 0 = 55	2
3	100 + 27 + 0 = 42	2
4	100 + 50 + 50 = 66	2
Post Intervention - Trial 1	100 + 18 + 50 = 56	3
2	100 + 25 + 0 = 42	2
3	100 + 50 + 0 = 50	2
4	100 + 50 + 0 = 50	2

APPENDIX O

CHILD OBJECTIVE IMPROVEMENT SCORES

Child O.I.S. = $\frac{x}{n} \times \frac{100}{1}$

Where x = $\frac{\text{B-A change observed}}{\text{maximum possible change}}$

$x = x_1$ - amount of attention to task (as a % of total length of trial)

x_2 - frequency of inappropriate behaviour.

		B	A	Observed Diff.	Max. Possible	$\frac{OD}{MP}$	O.I.S.
Darren	x_1	50.7	91.5	40.8	49.3	82.7	77.4
Mother	x_2	10.8	3	7.8	10.8	72.2	
Father	x_1	52.1	97.9	45.8	47.9	95.6	82.1
	x_2	8	2.5	5.5	8	68.7	
Chantal Mother	x_1	94	96	2	6	33	33
Father	x_1	88.7	82.6	-6	-87.7	-6	-6
Paul Mother	x_1	94.2	95.5	1.3	5.8	22.4	22.4
Father	x_1	97.7	98.7	1	2.3	43	43
Hanna Mother	x_1	88.1	100	11.9	11.9	100	100
Father	x_1	98.2	99.3	1.1	1.8	61	61
Matt Mother	x_1	45	99.5	34.5	55	62	58.5
	x_2	4	1.8	2.2	4	55	
Father	x_1	60	93.7	33.7	40	84	67.5
	x_2	3.5	1.7	1.8	3.5	51	
Johnny	x_1	71.5	98	26.5	28.5	92.9	75.6
Mother	x_2	6.5	1.7	3.8	6.5	58.4	
David Father	x_1	82.4	100	17.6	17.6	100	
Steven	x_1	100	99.2	0.8	100	- 8	- 8

APPENDIX P

SCORE SHEET FOR S.O.S. AND U. OF W.S.

SUBJECTIVE OPINION OF EFFECTIVENESS

1.	Do you feel more confident?	1 NO		2 SOMEWHAT		3 YES
2.	Has your behaviour changed?	1 NO		2 YES-GENERAL		3 YES-RELEVANT
3.	Was the course useful?	1 NO		2 YES-GENERAL		3 YES-RELEVANT
4.	Has the child's behaviour improved?					
	At the last session -	1	2	3	4	5
	At the phone call -	1	2	3	4	5
5.	How strongly would you recommend this course?	1	2	3	4	5
6.	How much did you like the sessions? (1 ... 5) X (overall sessions)					
7.	Were your expectations fulfilled?	1 NO		2 SOMEWHAT		3 YES

PARENT'S USE OF WORKSHOP - PHONE CHECK

1.	Completing/completed program.	0 NO		1 YES		
2.	How often are/were trials?	1 NOW & AGAIN		2 WEEKLY		3 DAILY
3.	How much of model remembered?	0	1	2	3	4
4.	Looked at behaviour checklist?	0 NO		1 YES		
5.	Looked at folder?	0 NO		1 YES		
6.	Kept any records?	0 NO		1 YES		
7.	Phoned F.T.U.?	0 NO		1 YES / NO NEED		

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