Parent Training on Functional Communication Training for Children with Autism

by

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A thesis submitted to the School of Community Services
in partial fulfillment of the requirements for
the degree of
Bachelor of Applied Arts in Behavioural Psychology

St Lawrence College
Kingston, Ontario
Canada.

April 2008
DEDICATION

To Dad, with love
Miss you
ABSTRACT

Children with autism and their families face a number of challenges, including waiting for effective services. Families can wait upwards of a year before receiving services. Developing effective resources that can assist parents when waiting for professional services is becoming increasingly more important. The purpose of this thesis is to examine the research literature on the effectiveness of Functional Communication Training for children with autism and the ability of untrained individuals (e.g. parents) to conduct all aspects of FCT. The review indicates that FCT is an effective treatment for children with autism, and individuals with no previous training are able to conduct all aspects of Functional Communication Training. A training manual for parents outlining how to conduct Functional Communication Training is developed. The manual is designed for professionals to offer parents of children with autism, who are not exhibiting severe behaviours, a resource to use while waiting for services. It is recommended that a pilot study be conducted to investigate the usefulness and effectiveness of the current edition of the training manual.
ACKNOWLEDGEMENTS

I first want to thank my mom, sister and fiancé Jason for all their support and tolerance during the writing and completion of my thesis and over the last four years. I also want to thank the Neurobehavioural Rehabilitation Center in London, where I first learned about Functional Communication Training and to the Child and Parent Resource Institute in London where I learned more about autism and was inspired to provide parents with a resource that would enable them to help their children.
# TABLE OF CONTENTS

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>DEDICATION</td>
<td>i</td>
</tr>
<tr>
<td>ABSTRACT</td>
<td>ii</td>
</tr>
<tr>
<td>ACKNOWLEDGEMENTS</td>
<td>iii</td>
</tr>
<tr>
<td>TABLE OF CONTENTS</td>
<td>iv</td>
</tr>
<tr>
<td>CHAPTER</td>
<td></td>
</tr>
<tr>
<td>I. INTRODUCTION</td>
<td>1</td>
</tr>
<tr>
<td>Overview</td>
<td>2</td>
</tr>
<tr>
<td>II. LITERATURE REVIEW</td>
<td>3</td>
</tr>
<tr>
<td>Clinical Setting</td>
<td>3</td>
</tr>
<tr>
<td>School Setting</td>
<td>5</td>
</tr>
<tr>
<td>Home Setting</td>
<td>7</td>
</tr>
<tr>
<td>Summary</td>
<td>9</td>
</tr>
<tr>
<td>III. METHOD</td>
<td>11</td>
</tr>
<tr>
<td>Design</td>
<td>11</td>
</tr>
<tr>
<td>Participants</td>
<td>11</td>
</tr>
<tr>
<td>Consent</td>
<td>11</td>
</tr>
<tr>
<td>Format</td>
<td>11</td>
</tr>
<tr>
<td>Evaluation Measure</td>
<td>12</td>
</tr>
<tr>
<td>IV. DISCUSSION</td>
<td>13</td>
</tr>
<tr>
<td>Summary</td>
<td>13</td>
</tr>
<tr>
<td>Contribution to Behavioural Psychology</td>
<td>13</td>
</tr>
<tr>
<td>Limitations</td>
<td>13</td>
</tr>
<tr>
<td>Recommendations</td>
<td>14</td>
</tr>
<tr>
<td>References</td>
<td>15</td>
</tr>
<tr>
<td>Appendices</td>
<td></td>
</tr>
<tr>
<td>A. Functional Communication Training Manual</td>
<td>16</td>
</tr>
<tr>
<td>B. Email for Permission to use the Functional Assessment Interview</td>
<td>17</td>
</tr>
<tr>
<td>C. Email for Permission to use the Motivation Assessment Scale</td>
<td>18</td>
</tr>
</tbody>
</table>
Chapter I: Introduction

Autism is part of a spectrum of disorders that are classified under the umbrella term pervasive developmental disorder (Wicks-Nelson & Israel, 2006). One of the most common neurological disorders, a diagnosis of autism includes deficits in social skills/interactions, impairments in communication, and restrictive, repetitive, and stereotyped patterns of behaviour, interests and activities (American Psychiatric Association, Diagnostic and Statistical Manual – IV, 1994). These features (which present differently with each child) not only have an impact on the child’s life but the lives of the people involved with the child including family members and teachers, as well as the community the child lives in.

A diagnosis of autism impacts all areas of the family’s life, emotional/physical well-being, and financially. It is estimated that treatment costs per year for a child with autism ranges from $50,000 - $120,000 depending on the severity of the diagnosis and type of treatment (Debates of the Senate, 2006). With 1 in 165 children (Autism Society of Canada, 2005) and their families affected by autism, it is becoming increasingly more important to develop and provide services that are effective, cost-efficient and easily administered in the child’s environment.

Children with autism often display a range of disruptive behaviours from tantrums to self-injurious behaviours. These behaviours affect the family as a whole, often making routine daily tasks a challenge, isolating the family from friends and extended families, and causing the child and families world to become smaller and smaller. The function the disruptive behaviour serves can range from obtaining attention or a desired item, escaping a situation or demand and expressing a want or need. For a number of children with autism an underlying variable in their engaging in disruptive behaviours is their inability to express themselves appropriately, which relates to one of the core features of the diagnosis, impairments in communication. By providing the child with a manner in which to communicate their wants and needs, the frequency of disruptive behaviours may decrease.

For a number of parents a delay in language is the first sign that there is a problem with their child’s development. Though some children with autism do develop language, it is usually not functional speech, and may consist of echolalia, delayed echolalia and deficits in receptive and expressive language. Functional Communication Training (FCT) is a behavioural procedure that utilizes functional assessment methods, including interviews, direct observations, and functional analysis to determine the function of the disruptive behaviour (Durand & Merges, 2001). Once the function is assessed then an alternative behaviour in the form of a communicative response is taught to replace the disruptive behaviour (Durand & Merges). The communicative response taught to the child can consist of verbal language, picture communication, gestures or assistive technology devices (Richmond Mancil, 2006). Once the response is taught then the disruptive behaviour is ignored and the new alternative behaviour, the communicative response, is prompted for and reinforced (Richmond Mancil). Thus, FCT can help to reduce disruptive behaviours and provide the child with autism a more functional and socially appropriate means to communicate with people in their environment.

In order to achieve this result a program must by implemented by a qualified professional. However, for the program to be truly successful the parents of the child with autism must also be able to implement the program and assess the child’s progress. Therefore, training parents to use FCT is critical in order to decrease the disruptive behaviours of the child and increase the ability of the child to communicate appropriately.
Overview

This thesis examines the existing literature on Functional Communication Training and critically reviews the utility of FCT with the autism population. Research on the various settings where FCT has been used is included. The ability of parents to conduct all aspects of FCT is evaluated through the literature, as well as the generalizability and maintenance of FCT assessed. A training manual for parents outlining how to conduct all aspects of Functional Communication Training is included in this thesis.
Chapter II: Literature Review

Functional Communication Training (FCT) “developed in the mid – 1980’s” (Durand & Merges, 2001, p. 111), has been used with children with developmental disabilities, including autism. Richmond Mancil (2006) conducted a review of the literature, from the data basis, ERIC, Education, PsycINFO, and Academic Search Premier, on autism and Functional Communication Training. Studies were included in the review if the primary intervention was FCT and at least one participant had a diagnosis of autism (Richmond Mancil). Eight studies were discussed in the review of which, the majority were conducted in clinic settings with the researchers as trainers (Richmond Mancil). The results of the studies conducted in the clinic setting reported an increase in communication and a decrease in disruptive behaviour (Richmond Mancil). Though the studies provide evidence that FCT can be successful for children with autism, the results need to be interpreted with caution, as the studies did not incorporate procedures for maintenance and generalizability of the results to other settings, people and overtime. Generalization of skills taught is an important concept to incorporate into a program for children with autism, as they often remember tasks specific to a situation and do not transfer the skills they have learned to other settings (Richmond Mancil). For Functional Communication Training to be truly beneficial for a child they need to be able to associate and utilize their new communication skills with all people, settings and situations they encounter. These studies only provide evidence for FCT in the clinical setting.

The review conducted by Richmond Mancil (2006) also found one study that utilized the teacher as a research assistant and was done in different areas of the participant’s classroom. This study furthers the evidence for the utility of FCT for children with autism, extending the success to the classroom. Still limitations are evident as the researcher implemented the procedures, and the teacher that had the role of research assistant was not the child’s regular classroom teacher (Richmond Mancil). This study as well did not plan for maintenance and generalizability or indicate success of FCT overtime.

Richmond Mancil (2006) identified one study that utilized the parents as the trainers and was conducted in the participant’s home. The results of the study provide evidence for the utility of FCT in the natural environment and provide some evidence for the generalizability of the procedures. This study is also limited in its findings as it did not assess for maintenance of the communication skills taught and the decrease of disruptive behaviour overtime.

The literature review conducted by Richmond Mancil (2006) though limited in the number of studies included, does provide evidence for the utility of FCT in clinical settings and preliminary evidence for the success of the FCT in the natural environment. Further studies are needed to provide evidence for the use of FCT for children with autism in the natural environment and using parents as trainers.

Clinical Setting

The review by Richmond Mancil (2006) found a number of studies that provided evidence for the used of Functional Communication Training with the autism population in a clinical setting. The results from the studies, though providing evidence for the success of FCT, did have limitations around generalizability and maintenance; as well the participants in the studies were only taught one communicative response.
Kahng, Hendrickson, and Vu (2000) used FCT without extinction in an inpatient setting with a 7-year-old boy with mental retardation and autism, who engaged in self-injurious behaviours, aggression and property destruction. The authors were investigating two conditions. Was FCT effective without the use of extinction and was a single FCT response or a multiple FCT response more effective (Kahng, Hendrickson, & Vu). Prior to beginning the intervention the authors conducted a functional analysis with attention, escape and alone conditions as described by Iwata, Slifer, Bauman, and Richman (1994), and added a divided attention and tangible condition (Kahng, Hendrickson, & Vu). During each condition of the functional analysis every occurrence of the participants challenging behaviour was reinforced. The functional analysis indicated that the participant’s behaviours were positively reinforced by tangible items (Kahng, Hendrickson, & Vu). The participant was then taught a FCT response in the form of a line drawing using picture communication symbols, for instance combining an “I want” picture with a picture of an item, and was required to verbalize the statement as well, in order to receive reinforcement (Kahng, Hendrickson, & Vu). The participant was taught two types of FCT responses, a single general mand e.g. “I want an item” and multiple specific mands e.g. “I want chips” (Kahng, Hendrickson, & Vu, pp. 321-322). During the intervention sessions, the participant was reinforced with one of six items during the single FCT condition and with the specific item requested during the multiple FCT condition. Each occurrence of the challenging behaviours, self-injurious behaviour, aggression and property destruction was reinforced during both FCT conditions (Kahng, Hendrickson, & Vu, 2000).

The results of the study found the multiple FCT condition to be more effective in reducing the participant’s challenging behaviours then the single FCT condition (Kahng, Hendrickson, & Vu). This would indicate the importance of providing an expanded communicative repertoire. As a child’s challenging behaviour can serve more than one function and be maintained by access to multiple reinforcers, it is important to provide the child with a way to communicate what they want. Providing the child with a means to specify what he/she wants removes the guess work for the parent and reduces the likelihood of the child exhibiting challenging behaviour.

This study provides evidence for using FCT without extinction, which is important as some parents may have difficulty in implementing extinction procedures. In the study FCT without extinction in the multiple condition may have been more effective because the participant received the reinforcer he wanted when he provided the appropriate mand, and when the challenging behaviours were exhibited he randomly received one of six reinforcers, which placed the challenging behaviour on a schedule of intermittent reinforcement (Kahng, Hendrickson, & Vu, 2000). Though intermittent reinforcement is usually strong in maintaining behaviour, less effort was needed to emit the communicative response and the desired reinforcer was received each time, making it more effective in maintaining the appropriate behaviour as compared to the challenging behaviour.

The study by Kahng, Hendrickson, and Vu (2000) provides evidence for the utility of FCT. From the results, items to consider when implementing FCT can be inferred; examples include teaching a more specific response, and considering the effort needed to emit the response as compared to the challenging behaviour. Caution needs to be used as there was only one participant in the study and the results may only be valid with him. As well the authors did not assess for generalization and maintenance as the study was conducted in the clinical setting with the authors as trainers, and the skills were not transferred to other settings or people. This study
expands the literature on using FCT but research conducted in the natural environment needs to be examined to provide evidence for the utility of a training manual for parents.

**School Setting**

Durand and Carr (1991) conducted a study to assess the generalizability of FCT to new environments and people and the maintenance of the intervention overtime. The study took place at a school, with three participants, all males who were enrolled in the same classroom. Participant one was 12-years-old, had a diagnosis of autism and moderate mental retardation and engaged in head hitting behaviours and hitting others. Participant two was 12-years-old, with a diagnosis of autism and severe mental retardation, and engaged in head banging and face slapping. The third participant was 9-years-old, with a diagnosis of pervasive developmental disorder and moderate mental retardation, and engaged in pinching behaviours and slapping others. All three participants had limited language abilities, participant one knew several phrases and exhibited frequent echolalia, participant two when prompted by others provided words or short phrases, and participant three utilized four or five words to indicate his needs (Durand & Carr).

The authors had the participant’s teacher and assistant teacher fill out the *Motivational Assessment Scale* (MAS) at the start of the study to assess possible factors contributing to the challenging behaviours exhibited by the participants (Durand & Carr, 1991). Durand and Carr used the information obtained in the MAS to develop hypothesis for the participants challenging behaviour that was then tested during the functional analysis stage of the study. The authors conducted escape and attention conditions during the functional analysis; the procedures for both are described in more detail in Carr and Durand (1987) and were adapted from Durand & Carr (1985). From the MAS and the functional analysis it was determined that the challenging behaviours of all three participants was maintained by escape and that participant three’s behaviours were also maintained by attention.

Prior to the start of the intervention the participants were taught a phrase to request assistance and for participant three to request attention (Durand & Carr, 1991). Participant two was taught to say “I don’t understand”, participant one and participant three were taught to say “help me” in order to request assistance and participant three was also taught to say “Am I doing good work” in order to request attention (Durand & Carr, 1991, pp. 257-258). Training sessions continued until the participants could verbalize the above phrases without being prompted.

During intervention all incidences of the challenging behaviours exhibited by the participants were ignored or for safety reasons blocked to prevent injury (Durand & Carr, 1991). After the conclusion of the intervention (year one), the participants had a break and then returned to school (year two), were in separate classrooms and had different teachers. Eleven unannounced visits were conducted to assess the participants progress, after another break the participants returned to school (year three), and two unannounced visits were conducted to assess the participants progress. The teachers for year two and three were not aware of the response taught to the participants, and were provided no training in how to respond. During year two, participant two showed an increase in disruptive behaviours over baseline, it was thought that his new teacher was not responding to his request for assistance because of poor articulation. A booster session was conducted with the participant only to improve articulation, after which the disruptive behaviours decreased.
The mean rates of unprompted requests for assistance or attention for the three participants by year three was, participant one 3.5%, participant two 8.0% and participant three 6.0% (Durand & Carr, 1991). For all three participants there was a decrease in challenging behaviours over baseline (Durand & Carr, 1991). For participant one baseline was 9.5%, and year three was 0%. For participant two, baseline was 22.9%, and year three was 5.5% (Durand & Carr, 1991). For participant three, baseline was 22.7%, and year three 3.0% (Durand & Carr, 1991).

The results of the study indicated that the participants were able to initiate a request for assistance or attention without prompts (Durand & Carr, 199). This is an important finding to note as often children with autism can become prompt dependent. The results of the Durand and Carr study provide further evidence for the use of FCT with the autism population. The study also expands the literature by providing evidence for the generalizability and maintenance of FCT. Two of the three participants generalized the response taught to new environments and people without further training and the responses taught were maintained for up to two years. This study also brings to light some important items to consider when conducting FCT; mainly the need for choosing an appropriate response and verifying the response is understood. During year two, participant two’s new teacher had a difficult time understanding his request for assistance; fortunately all that was needed was a booster session to improve articulation. Under different circumstances there may have been a need to teach the child a different communicative response. Thus it is important prior to beginning a program to verify that the communicative response chosen is within the child’s ability to exhibit, and if verbal language is being used to confirm with more than one person and if possible someone not familiar with the child that their verbal language is understood.

Although the study by Durand and Carr (1991) does provide evidence for the maintenance and generalizability of FCT there are some limitations to consider. Despite the fact that the participant’s teachers were involved in the study, their roles were simply to respond to the participant’s request and it was the authors of the study who conducted the functional analysis, taught the response, and assessed the participant’s progress. This study provides evidence for the use of FCT in a more natural environment; however it does not provide evidence for the ability of a person other than a trained professional to conduct all aspects of FCT.

Two studies were found that taught teachers to conduct functional analysis, a component of Functional Communication Training, Moore et al. (2002), and Erbas, Tekin-Iftar, and Yucesoy (2006). Moore et al. (2002) conducted a study with three teachers, all of whom had limited experience with behavioural techniques. Two of the teachers taught in regular classrooms and one in an inclusion classroom, one male student from each class was selected to participate in the study. The targeted behaviour for each student was yelling out in class. The training phase and implementation of the functional analysis procedures took place in the individual teacher’s classrooms. Two conditions were chosen attention and demand. During the training phase the teachers were provide written and verbal information on functional analysis, rehearsal, modeling sessions and performance feedback. Graduate students played the role of the target student during the training sessions. After training the teachers implemented the two conditions, attention and demand with the target student during instructional periods that had high incidences of the target behaviour. Moore et al. (2002) found that with training teachers were successful in conducting functional analysis with their students.
In a more recent study, Erbas, Tekin-Iftar, and Yucesoy (2006) taught five special education teachers and one student teacher to conduct functional analysis and then garnered teacher opinion about the process. Each teacher selected for the study had experience with behaviour problems, had a current student with behaviour problems, and no prior experience with functional analysis procedures (Erbas, Tekin-Iftar, & Yucesoy, 2006). The target behaviours exhibited by the students were throwing objects, being out of seat, screaming, not following verbal direction, and temper tantrums. Four conditions were conducted attention, demand, play and tangible, and teachers were taught in two phases. The first phase consisted of instructional material, lecture and video, and to continue to the second phase teachers were required to score above 90 on a 20 item quiz. During the second phase teachers received individual consultation on defining problem behaviours, conducted interviews with teacher aids and/or parents, summarized the interviews, observations, developed hypothesis and received feedback. The results from the study showed that after training teachers performance went from M of 5.01% at baseline to M of 89.98%, and that teachers had a positive change of opinion about using functional analysis in their classrooms.

The studies by Moore et al. (2002) and Erbas, Tekin-Iftar and Yucesoy (2006) provide evidence that people with no prior experience of functional analysis, who received sufficient training, are capable of conducting functional analysis procedures in the natural environment with successful results. Though the studies do not evaluate the importance of teaching functional analysis using multiple medias, both studies do incorporate different forms, for instance lecture, video, and rehearsal. This is an important factor to consider as not every person learns the same way, thus having multiple medias incorporated into the manual would target more than one learning style and may be more effective in enabling parents to learn the skills needed to conduct FCT. A limitation for both studies is that neither evaluated the ability of teachers to conduct functional analysis independent of the researchers or did a follow-up to see if the teachers conducted functional analysis independent of or with limited contact from a trained professional.

**Home Setting**

Dunlap, Ester, Langhans, & Fox (2006) conducted a study to evaluate the effectiveness of parent implemented FCT in reducing challenging behaviours of toddlers during home routines. The participants in the study included two toddlers and their mothers and sessions were carried out in the living rooms of the family’s homes. The first participant was a 33-month-old girl with expressive language delays and who engaged in hair pulling, whining and spitting. The second participant was a 30-month-old girl with speech delays, and engaged in kicking, pushing, hitting and verbal outbursts.

Home routines targeted were selected based on mother identification as being associated with the challenging behaviours exhibited by the toddlers and were confirmed through direct observations by the researchers (Dunlap et al., 2006). For the first participant the routines selected were transitions, personal time and diverted attention. For the second participant the home routines were sharing, diverted attention and assistance.

The function of the participants challenging behaviours was identified through the use of a modified version of the Functional Behavioural Assessment Interview and A-B-C data
collected through direct observations (Dunlap et al., 2006). Baseline data was collected on the challenging behaviours during each of the routines prior to the start of the intervention. Prior to intervention the mothers were trained by the researchers on how to use Functional Communication Training which included modeling on prompting of alternative behaviour and reminders on withholding reinforcers when the toddler engaged in the identified challenging behaviours. During the intervention mothers were advised to provide the prompt for the alternative behaviour prior to the occurrence of the challenging behaviours. It was observed during baseline that both toddlers used gestures that typically indicated the onset of the behaviours and both mothers were aware of these early indicators. As both toddlers were able to imitate words or phrases, verbal prompts were used prior to the onset of the challenging behaviours, the mothers would say the word or phrase that the toddlers were to imitate in order to receive the reinforcer e.g. mother’s attention. For participant one the alternative behaviour for the transition routine was “play with me”, for personal time (for mother) either “play with me” or “excuse me”, and for the diverted attention routine, “excuse me” (Dunlap et al., 2006, p. 86). For participant two the alternative behaviours were for the sharing routine “play”, for diverted attention “excuse me” and for the assistance routine “help me” (Dunlap et al., 2006, p. 86). The results of the intervention indicate that both toddlers utilized the alternative behaviours and had a noted decrease in challenging behaviours in all three routines targeted. The results also indicated that the mothers were accurately able to implement FCT with success, and after the initial training sessions, implemented the procedure independent of the researcher’s involvement.

The Dunlap et al. (2006) study provides evidence for the ability of parents, after minimal training, to implement Functional Communication Training with their children accurately and effectively. The study also provides evidence for the effectiveness of teaching more than one response, which is important for increasing the child’s expressive language abilities. This study does have limitations around generalizability and maintenance. Though the children were taught multiple responses they were specific to a particular routine and the intervention only occurred in the living room at the family’s home. The study did not indicate if the children generalized the words or phrases taught to other areas of the home or when they were outside the home, and if the decrease in challenging behaviours continued.

Richmond Mancil, Conroy, and Nakao (2006) used Functional Communication Training, in the home environment, to increase mands and spontaneous communication and decrease disruptive behaviours. The participant involved in the study was a 4-year-old boy with a diagnosis of pervasive developmental disorder, who engaged in tantrums that involved throwing items to the floor, dropping to the floor, whining and screaming. The participant’s mother who was also involved in the study wanted to teach her son a functional way to communicate as he rarely used spontaneous communication.

During all phases of the study a preference assessment was conducted during the first 5-minutes of each day to determine the reinforcers, this was done because the participant’s mother noted he became easily satiated. A functional analysis similar to that described by Iwata, Dorsey, Slifer, Bauman and Richman (1994) was conducted, the exceptions being there was no alone condition, a tangible condition was added and the functional analysis was conducted in the participant’s home (Richmond Mancil, Conroy, & Nakao, 2006). During each condition, attention, tangible, escape and free play, the environment remained the same and the participant’s mother provided the appropriate reinforcer e.g. attention for each occurrence of the disruptive behaviour. The function of the participant’s behaviour seemed to be tied to the
obtainment of a tangible item. The behaviours exhibited during the tangible condition served as baseline.

The participant’s communication response was in the form of handing a picture communication card to the researcher and later to his mom (Richmond Mancil, Conroy, & Nakao, 2006). Prior to the start of the intervention, the participant was taught to independently hand a picture card when prompted to the researcher. There were four mand phases A, B, C and D.

Each mand phase represented a request for a different item, which was based on the preference assessment; requests for a toy horse, toy helicopter, blanket and movie were used (Richmond Mancil, Conroy, & Nakao, 2006). During each phase the participant was prompted if he would like the item, to provide the card, to aid with spontaneous communication the verbal prompt was faded until the researcher would just play with the item and wait for the participant to request the item by presenting the card without being prompted. To help differentiate between the different mands, distractor cards were used in phases B, C, and D. During phase B the participant was to choose between two cards, phase C between three cards and phase D between four cards, and he was provided the item for the card he presented. During the mand C phase, the procedure was transferred from the researcher to the participant’s mother. Initially both the researcher and the mother were present, and the mother prompted the participant for the card, if he provided it to the researcher, he was prompted to ask his mother. The participant’s mother conducted the rest of the sessions in mand C and all sessions during the mand D phase.

During the tangible condition (baseline), the participant had a mean of two tantrums, and for each mand phase, his tantrums decreased to zero for all portions of the phase, verbal prompt, spontaneous communication and distractor (Richmond Mancil, Conroy, & Nakao, 2006). For all phases the participant’s latency for responding was two to three seconds and by mand phase D the participant’s verbalizations had increased from two words to 50 words. The results show that the participant’s communication increased at home and his disruptive behaviours decreased and the FCT procedure was transferable to his mother. This study provides further evidence for the utility of using FCT with children with autism. As well the study provides evidence for the ability of parents to conduct components of FCT. The mother in the above studied participated in both the functional analysis and the mand phases of the Functional Communication Training. The study incorporates important aspects to consider when conducting FCT, including reducing prompts, transferring the skills learned to other people, and teaching multiple mands. There are some limitations to the study, primarily FCT was only conducted in the participant’s living room, and it was not indicated whether the skills learned generalized to other settings.

Summary

The studies reviewed in this literature search provide evidence for using Functional Communication Training with the autism population and the feasibility and effectiveness of conducting FCT in the child’s natural environment. The studies by Moore et al. (2002), Erbas, Tekin-Iftar and Yucesoy (2006) and Dunlap, Ester, Langhans and Fox (2006) provide evidence that people with no previous experience with minimal training are able to conduct the various components of Functional Communication Training. Thus if parents are provided a training manual that efficiently outlines how to conduct FCT, they should be able to do so effectively and with success. The review also provides evidence for important items to incorporate into the manual, such as that FCT can be successful without extinction procedures and the importance of
teaching multiple mands. As well the articles reviewed provide evidence for how important it is for the skills taught in FCT to generalize to other settings and people. Conducting FCT in the child’s natural environment with the parents as trainers will increase the opportunities for the child to communicate, as parents are more likely to use the skills with the child outside the home.
Chapter III: Method

Design

The format for this thesis is a training manual (Appendix A). The training manual is designed to train parents/caregivers of children with autism to use Functional Communication Training. The rationale for designing the manual is to provide parents with an inexpensive but effective means for improving their child’s functional communication, while in turn decreasing problem behaviours. The idea behind the manual was to provide a resource containing strategies that parents of children with less severe behaviours and deficits could use on their own with success. The manual is designed as a resource that professionals could provide parents who are waiting for service.

Participants

The manual is intended for parents of children with a diagnosis of autism, who do not have functional communication and are exhibiting problem behaviours in relation to their communication deficits. The principles and procedures outlined in the manual could be used with children who do not have a diagnosis of autism, but have problem behaviours in relation to communication deficits. The manual could also be used by teachers.

Consent

If the manual is provided to teachers to utilize then prior to implementing the intervention consent will need to be obtained from the child’s parent(s). It will also be important for the teacher to collaborate with the child’s parent(s) when conducting the procedures outlined in the manual.

Format

The manual includes a brief introduction to Functional Communication Training, and then is divided into the following six sections.

Section 1: Provide the steps necessary for conducting a functional assessment. Including possible questions the parent or caregivers might ask themselves or each other about the behaviour. A copy of the Functional Assessment Interview (O’Neill et al. 1997) (Permission obtained to use FAI, Appendix B) and the Motivation Assessment Scale (Durand, 1990) (Permission obtained to use MAS, Appendix C) is included. The next part will outline steps for defining the target behaviour and conducting direct observations and methods for collecting data on the behaviour and communicative responses currently used. A copy of an ABC chart and sample recording sheets will be included.

Section 2: Will discuss how to conduct a functional analysis to determine the function of the behaviour. This section will also discuss how to setup the possible conditions for testing the function of the behaviour. For instance tangible and demand conditions.

Section 3: Will have procedures on how to conduct a preference assessment to find affective reinforcers for the child.
Section 4: Will provide steps for selecting the communicative response to be used, for instance verbal language or picture communication.
Section 5: Will go over the steps for conducting Functional Communication Training.
Section 6: Will look at ways to evaluate the success of the program, including parental evaluations, feedback and possible methods for generalizability and maintenance.

**Evaluation Measure**

Included at the end of the manual will be a parent satisfaction form and a self addressed envelop for parents to fill out and then return to the author. This form will be used to evaluate parents understanding of the material presented in the manual, what areas of the manual did the parents have success with implementing and what areas did they struggle with, and their over all satisfaction with the manual. The information obtained from this form will be used to improve future editions of the manual.
Chapter IV: Discussion

Summary

This thesis examined the following areas: 1) the utility of using Functional Communication Training (FCT) with the autism population, particularly children; 2) the feasibility of parents conducting all components of FCT and 3) the evidence supporting the development a FCT training manual for parents. The research reviewed indicates that FCT is indeed effective in teaching functional communication to children with autism and in decreasing problem behaviours (Richmond Mancil, 2006). Furthermore, the research also indicates that untrained individuals when provided with adequate resources are able to conduct the various components of Functional Communication Training (Erbas, Tekin-Iftar & Yucesoy, 2006; Richmond Mancil, Conroy & Nakao, 2006). Lastly, the literature reviewed suggests that there is sufficient evidence for the development of a training manual designed to instruct parents how to conduct FCT.

Contribution to Behavioural Psychology

A manual on FCT was created to provide a resource professionals can offer to parents as an option while waiting for service. The manual may also assist in reducing waitlists for professional services so that those in most need are able to access help sooner. This manual is designed to be used after consultation with a professional and not in lieu of professional services.

Limitations

Although the intended audience for the manual is parents of children with autism there are limitations that should be considered. The manual should not be used by parents whose children engage in severe problem behaviours, such as self-injurious behaviour and/or aggression towards others. Parents of children who exhibit severe problem behaviours should pursue professional services.

Another limitation involves the time required to learn and successfully implement the procedures presented in the manual. As this process can be time consuming, the manual may not be well-suited for parents who do not have the time to devote to learning and implementing the procedures correctly and consistently. Though the manual can also be provided to schools, it may not be feasible for teachers to implement the manual due to the time involved. It may be necessary to have another individual in the class, such as an educational assistant, conduct the procedures in the manual and this option may not be available to schools with budget constraints.

Another limitation is that the current edition of the manual only provides two examples of conducting Functional Communication Training sessions, and more examples may be needed to clearly outline the procedures involved. As well parents may have difficulty following the steps needed to conduct a FCT session in the current format. A different format may be needed to help clarify how the FCT sessions are to be run, for instance writing the steps in numerical sequence.

While the manual is designed to allow untrained individuals to conduct the components of FCT, another limitation could be that parents may need to have a certain level of intellect or education in order to understand the manual, to follow the directions described, and be able to conduct FCT independent of professional assistance. Further research is needed to determine
what level of intellect or education may be required. Another possible limitation is the reception of the manual from the professional community. Even though the manual is intended to assist in reducing waitlists, if the manual is not endorsed by the professional community, the utilization of the manual by parents may be discouraged or may not occur at all.

Recommendations

The usefulness of the current version of the FCT manual should be investigated further in a pilot study with a select group of parents of children with autism. Further revisions may be required based on the results of such a pilot investigation and prior to publication or wider distribution of the manual to parents. Such areas to research include the following: 1) determining if the manual adequately explains and outlines FCT, and 2) if parents are able to independently implement FCT from the manual. Feedback obtained from the pilot group of parents can be used to improve the contents of the manual, and determine if parents are able to implement the manual without professional assistance or other resources. If other resources are needed to supplement the manual, a group workshop could be designed that would utilize the manual but provide additional training parents may require in implementing FCT.

While the current version of the manual incorporates only one form of media (print), future editions will have a companion DVD, that will provide visual examples of how to conduct a functional analysis and FCT sessions. It is also recommended that a Problem Behaviour Severity Scale be designed and included in the manual. Such an assessment scale would be helpful for parents and professionals to use in determining if the manual alone is appropriate in the case of children presenting with severe problem behaviour, or if other professional services are required.
References


Appendix A

Functional Communication Training

Manual
A FUNCTIONAL COMMUNICATION TRAINING MANUAL
FOR PARENTS OF CHILDREN WITH AUTISM

By

Amanda-Brooke Thompson

April 2008
TABLE OF CONTENTS

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>TABLE OF CONTENTS</td>
<td>i</td>
</tr>
<tr>
<td>INTRODUCTION</td>
<td>1</td>
</tr>
<tr>
<td>PURPOSE</td>
<td>2</td>
</tr>
<tr>
<td>FUNCTIONAL ASSESSMENT</td>
<td>3</td>
</tr>
<tr>
<td>Choosing the Target Behaviour</td>
<td>3</td>
</tr>
<tr>
<td>Defining the target behaviour</td>
<td>3</td>
</tr>
<tr>
<td>Indirect Assessment Methods</td>
<td>4</td>
</tr>
<tr>
<td>Motivation Assessment Scale (MAS)</td>
<td>4</td>
</tr>
<tr>
<td>Functional Assessment Interview (FAI)</td>
<td>4</td>
</tr>
<tr>
<td>Creating an Indirect Assessment</td>
<td>5</td>
</tr>
<tr>
<td>Unstructured Interview</td>
<td>5</td>
</tr>
<tr>
<td>Who to Interview</td>
<td>5</td>
</tr>
<tr>
<td>Direct Observations of the Target Behaviour</td>
<td>6</td>
</tr>
<tr>
<td>Recording Frequency and Duration of the Target Behaviour</td>
<td>6</td>
</tr>
<tr>
<td>Guidelines for Conducting Direct Observations</td>
<td>7</td>
</tr>
<tr>
<td>Generating the Hypotheses</td>
<td>7</td>
</tr>
<tr>
<td>FUNCTIONAL ANALYSIS</td>
<td>9</td>
</tr>
<tr>
<td>Control Condition</td>
<td>10</td>
</tr>
<tr>
<td>Attention Condition</td>
<td>10</td>
</tr>
<tr>
<td>Escape/Demand and Tangible Condition</td>
<td>10</td>
</tr>
<tr>
<td>FUNCTIONAL COMMUNICATION TRAINING</td>
<td>11</td>
</tr>
<tr>
<td>Preference Assessment</td>
<td>11</td>
</tr>
<tr>
<td>Reinforcer Assessment</td>
<td>12</td>
</tr>
<tr>
<td>Choosing the Communicative Response</td>
<td>12</td>
</tr>
<tr>
<td>Functional Communication Training Session</td>
<td>13</td>
</tr>
<tr>
<td>Requesting a Break or Help Sessions</td>
<td>13</td>
</tr>
<tr>
<td>Requesting a Break using Picture Communication</td>
<td>14</td>
</tr>
<tr>
<td>How to Respond to the Target Behaviour</td>
<td>15</td>
</tr>
<tr>
<td>Requesting Help using Verbal Communication</td>
<td>15</td>
</tr>
<tr>
<td>Evaluating the Success of Functional Communication Training Session</td>
<td>16</td>
</tr>
<tr>
<td>Generalization</td>
<td>16</td>
</tr>
<tr>
<td>SUMMARY</td>
<td>17</td>
</tr>
<tr>
<td>REFERENCES</td>
<td>18</td>
</tr>
<tr>
<td>ADDITIONAL SOURCES</td>
<td>20</td>
</tr>
<tr>
<td>APPENDICES</td>
<td></td>
</tr>
<tr>
<td>A. Glossary</td>
<td>21</td>
</tr>
</tbody>
</table>
B. Motivation Assessment Scale ................................................................................... 23
C. Functional Assessment Interview ............................................................................. 26
D. ABC Chart ................................................................................................................ 36
E. Frequency and Duration Recording Sheets............................................................... 38
F. Graph of Frequency Recording ................................................................................. 40
G. FCT Manual Parent Satisfaction Questionnaire ....................................................... 42
Deficits in communication are a core feature of autism*. These deficits provide a challenge for the child as they are unable to express their wants and needs. Though some children with autism do develop language it is not always functional, meaning the child still experiences some difficulties expressing themselves. For other children the behavioural problems they exhibit can be attributed to their communication deficits. Thus, an instructional procedure that targets the communication deficits will often help improve the behavioural problems a child exhibits.

**Functional Communication Training** (FCT) is a behavioural procedure that utilizes functional assessment methods and functional analysis to determine the function of the disruptive behaviour (Durand & Merges, 2001). Once the function is determined then an alternative behaviour in the form of a communicative response is taught to replace the disruptive behaviour (Durand & Merges, 2001). The communicative response taught to the child can consist of verbal language, picture communication, gestures, or assistive technology devices (Richmond Mancil, 2006).

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* Definitions for words in bold can be found in the glossary (Appendix A)
Purpose

This manual is designed as a resource for professionals to offer parents as an option to use while waiting for service. This manual should not be used without first consulting with a professional or in lieu of professional services. This manual can also be offered to teachers as a resource to use within the classroom. If used by teachers then consent is needed from the child’s parents prior to implementing the manual. It is important for teachers to collaborate with the child’s parent(s) when conducting the procedures outlined in the manual.

This manual will outline the following procedures: how to conduct both a functional assessment and functional analysis, how to choose effective reinforcers, how to select an appropriate communicative response, how to conduct a functional communication training session and will include a glossary of terms.

Before beginning any type of intervention it is important to first rule out that there are no underlying medical issues that could attribute to the behaviour problems of concern. Lastly, it is recommended that the entire manual be read before implementing the procedures described.
**Functional Assessment**

Functional assessment is used to gather information about behaviours exhibited by an individual using the following strategies: 1) indirect methods such as interviews, questionnaires, and scales; and 2) direct observations of the behaviour (O’Neill et al. 1997). A third component in the functional assessment process is functional analysis which will be discussed later in this manual.

Functional assessment is designed to provide a thorough description of the behaviour in question, including information about when the behaviour is most likely to occur, specific events that usually precede the behaviour, as well as to identify situations in which the behaviour is more likely to be exhibited. Information about the consequences that might be maintaining the behaviour is also obtained in the functional assessment. This assessment information helps to create a complete picture of the child’s behaviour and is imperative in generating hypotheses about the function of the behaviour (O’Neill et al. 1997). The function of the behaviour refers to “the purpose the behaviour serves for an individual (Hanley, Iwata & McCord, 2003, p. 148). A word of caution is warranted. Even if the function of the behaviour is thought to be known, it is always important to conduct a systematic and thorough functional assessment as it just may yield a different result and/or provide new information.

**Choosing the Target Behaviour**

To begin the functional assessment process, the first step is to choose the behaviour that will be targeted (from here on referred to as the target behaviour). For the purpose of this manual, the target behaviour is defined as an observable, measurable action that an individual does, or simple speaking something that occurs and that can be seen (Glasberg, 2005; Sulzer-Azaroff & Mayer, 1991). As complex human beings, children will probably exhibit more than one behaviour of concern. When conducting a functional assessment one should begin by targeting one form of behaviour, for example tantrums. Factors that one might consider when choosing which behaviour to select as the target behaviour include the following: the degree of concern the parent has about the behaviour, the frequency of the behaviour and the impact the behaviour has on the quality of the child’s life (Glasberg, 2005).

**Defining the Target Behaviour**

Once the target behaviour is chosen, the next step is to define the behaviour. When defining the target behaviour there are a few considerations that should be kept in mind. First, as stated above the behaviour chosen should be observable: so to define the behaviour, one needs to describe clearly how the behaviour appears to an observer. Using the example above one should not simply define the target behaviour as a “tantrum”. The reason being, a “tantrum” exhibited by child A could look completely different from the “tantrum” exhibited by child B (Glasberg, 2005).

To help define the target behaviour, the child should be observed engaging in the behaviour and these observations should be recorded. Particular details should be noted which distinguish certain features of the child’s unique “tantrum” behaviour. To clarify further, it may be important to write how one is to know the behaviour has started and ended. For example,
tantrum behaviour may begin when the child starts crying and drops to the ground, and the tantrum then ends when the child stops crying and returns to his or her feet.

In describing the behaviour it may also be helpful to write it down and provide the definition to another person (without naming the definition as a tantrum) and then have that person observe the child and see if they are able to identify when the child engages in the particular behaviour. Another option might be to hand the definition to another person and have them act out the behaviour and if they can act it out correctly (e.g. it looks similar to the child’s behaviour) then the definition is clear (Glasberg, 2005).

A key to defining behaviour is that someone else should be able to pick up the definition and know to what it is referring. So keeping the definition simple, but descriptive, and not too specific is imperative. A complete definition for a target behaviour labelled “tantrum” may be defined as follows. A tantrum begins when the child drops to the floor, starts crying, and hits the floor with his or her hands and feet. The tantrum ends when the child stops crying, hitting the floor and returns to his or her feet.

**Indirect Assessment Methods**

Now that the target behaviour has been selected, the next step is to begin gathering more detailed information about the child and his or her relationship to the target behaviour. In this section, indirect assessment methods will be discussed. Indirect assessment methods can take the form of structured or unstructured interviews, questionnaires, and scales (O’Neill et al. 1997). A number of these instruments can only be administered and interpreted by a trained and qualified professional such as a psychologist. However, there are options available to for those without such training.

**Motivation Assessment Scale (MAS)**

One option is the *Motivation Assessment Scale* (MAS) (Appendix A), which is “designed to identify those situations in which an individual is likely to behave in certain ways” (Durand, 1990, p. 48). The questionnaire consists of sixteen questions, which can each be answered by selecting a response ranging from a score of zero (never) to six (always). Each question corresponds to one of the following four categories: sensory, escape, attention, and tangible. The scores under each category are tallied and then these are ranked. The MAS provides information about variables that might be maintaining the target behaviour (Durand, 1990). For instance a child, who exhibits the target behaviour of a tantrum, may score high in the attention category, which could indicate that, the maintaining consequence is attention. In other words, each time the child engages in a tantrum, attention is provided to the child.

**Functional Assessment Interview (FAI)**

Another example of an indirect assessment instrument is the *Functional Assessment Interview* (FAI) (Appendix B), a structured interview developed by O’Neill, Horner, Albin, Sprague, Storey and Newton (1997). The FAI is divided into eleven sections and is used to gather information about the problem behaviour, what the behaviour looks like, when and where it happens, and what is maintaining the behaviour. Although the FAI can take some time to complete, the interview can yield valuable information about the target behaviour. In the area of
autism, there are also a number of books that provide examples of other indirect assessment instruments that can be used with this population such as, *Functional Behavior Assessment for People with Autism* by Beth A. Glasberg (2005). Another option is to create one’s own indirect assessment instrument.

**Creating an Indirect Assessment Interview**

When creating an indirect assessment instrument, it is important to include what is known about the behaviour. Items to include should probe information about when the behaviour is most often to occur. For instance, is the behaviour more likely to occur in the morning, at school or at night? Does the behaviour occur more often when the child is alone or when he or she is asked to complete a task? If the child attends school, does the behaviour occur more often at school or at home? It may be particularly helpful to gather information about a typical day for the child. What time do they get up, go to sleep, etc.? The role others play in the child’s life when the behaviour occurs is also critical. Are there certain people who are often present when the behaviour? This question may be even more important if the behaviour is not consistent between settings such as if the behaviour occurs most often at school, when the teacher and the child’s peers are present, then at home with the child’s parents are present.

Another question to pose might focus on what the parent or teacher does or interpretations that are made when responding to the child’s behaviour. For instance, the parent may have learned that when the nonverbal child, starts exhibiting a certain behaviour that others may see only as arbitrary behaviour, is the child’s way of asking for help. Other items that could be included in an indirect assessment instrument are questions about what a parent could do that would result in an increased likelihood that the child would exhibit the target behaviour, or what the parent could do that would likely not result in the child exhibiting the target behaviour.

**Unstructured Interview**

An unstructured interview is another type of indirect assessment that could be used to question others who know the child about the particular behaviour of concern. For instance, one parent may sit down with the child’s other parent and ask them to describe the child’s behaviour. Additional questions can be added that further elaborate details concerning the target behaviour.

**Who to Interview**

Whether a previously devised instrument is used or a parent creates a unique indirect assessment tool, as many significant people in the child’s life as possible should be interviewed including the child’s other parent, grandparents, teacher and/or siblings. Essentially, anyone in the child’s life that has seen the child exhibiting the target behaviour and is able to provide information about the behaviour should be questioned (O’Neill et al.1997). Following the indirect assessment, the next step is to conduct direct observations of the target behaviour.
Direct Observations of the Target Behaviour

Conducting direct observations of the behaviour adds to the indirect assessment information and helps to create an even more complete picture of the target behaviour. Direct observations can provide important information about the antecedents (what occurs before) and consequences (what occurs after) a behaviour. Direct observations can also provide information about the frequency of behaviour (how often it occurs) and the duration (how long the behaviour occurs) (Sulzer-Azaroff & Mayer, 1991).

In order to obtain information about the antecedents and consequences of behaviour, an A-B-C log or chart (Appendix C) can be used. Where A = antecedent, B = behaviour, and C = consequences. When using an A-B-C log or chart, a column can be added to record the date and time the behaviour occurred along with a column for the perceived function of the behaviour. It is important when noting the antecedent that one does not just indicate the situation that the child is engaged in (O’Neill et al., 1997). The antecedent is what occurs just before the behaviour. For example, a child is playing with his or her toy (not the antecedent), the child is provide a task or demand e.g. the child is asked to put away his or her toy (antecedent), the child starts to tantrum (behaviour), and the child is allowed to continue to play with his or her toy (consequence) which stops the tantrum. In this situation the perceived function would be attention as the child stopped the tantrum when the parent returned to the child. When using an A-B-C log or chart, it is important to observe and record more than a few instances of the behaviour. Although there is no certain number of incidences that should be recorded for the target behaviour, if the behaviour occurs more than once on a daily basis, a week of observations may be required.

Recording Frequency and Duration of the Target Behaviour

Along with the A-B-C data, the frequency or duration of the behaviour can be observed and recorded. It may be important to observe and record both the frequency and duration of the behaviour, or the frequency or duration only. Determining which to use will depend on the target behaviour. For example, if the child has one tantrum a day, and the tantrum can last fifteen minutes, then duration may be the better recording method. If the child throws objects fifteen times a day, and the throwing behaviour lasts one minute, then frequency may be the better recording method. To record the frequency, each occurrence of the behaviour is counted and for duration, the time the behaviour begins until the time the behaviour ends is recorded. Thus, when recording the duration, the behaviour should have a clear start and end; this can be made clear when defining the target behaviour.

Appendix D provides simple examples of recording sheets for frequency and duration. Data obtained from observing the target behaviour using frequency or duration recording is referred to as baseline data, or data collected on the behaviour of interest prior to intervention. This data can then be compared to the behavioural data collected during and after an intervention.

As with an A-B-C log or chart, there is no specific amount of time required to complete the observation and recording. One suggestion is to record the behaviour until it is stable. This means that the frequency or duration of the behaviour is occurring at around the same number if recording frequency, or similar length of time if recording duration. One way to visualize this is to use a graph. A graph can be constructed either using graph paper or a computer program such as Excel. Duration or frequency will go on the y-axis and observation periods (e.g. days or
sessions) on the x-axis. Appendix E provides an example of frequency recording, showing a behaviour that is relatively stable, as the last few sessions having similar number of behaviours.

**Guidelines for Conducting Direction Observations**

There are a few guidelines to keep in mind when conducting direct observations. One is to consider reactivity, whereby, the presence of the observer can alter the behaviour of the person being observed (Sulzer-Azaroff & Mayer, 1991). For instance, if a parent is wanting to observe the child in his or her classroom (after receiving the teacher’s permission), it is best that the parent (prior to collecting any observational data) spends a few days in the classroom so the child becomes used to the parent’s presence.

When conducting direct observations it is also a good idea whenever possible, that the person doing the observations not be interacting with the child. Under some circumstances this may not be possible, and more creative ways to record behaviour may need to be devised. When recording behaviour it is advisable to use methods that are the least intrusive. Using a pencil and paper may be an okay method when recording behaviours at home while out in public though this method may be seen as intrusive and for that matter not easy to do. When observing at a grocery store a better option, for example, might be to use a device such as a counter that can be discretely placed in a pocket and pressed each time the behaviour occurs (Glasberg, 2005). A counter may be a good option for recording frequency, while a sports watch with a start/stop function may be good for recording duration.

Another item to keep in mind is time. Direct observations can be time consuming. It is not necessary to observe and record a child’s behaviour all day. From the information obtained in the indirect assessment, it may be possible to determine a time when the behaviour occurs more often. If not, then dividing the day up into observation periods can help. An example might be to conduct observations twice during the morning in five minute blocks, and then do the same in the afternoon and evening.

Now that indirect assessments and direct observations of the target behaviour are complete, the next step is to review the information obtained and generate a hypothesis about why the child exhibits that target behaviour.

**Generating the Hypotheses**

When generating the hypotheses about the target behaviour, all the information obtained from the functional assessment should be carefully considered. Hypotheses are the assumptions or guesses as to what the function of the behaviour is, as well as what might be maintaining the behaviour and what the possible predictors of the behaviour may be (O’Neill et al. 1997). For instance, the hypotheses that may be generated from a functional assessment of the example target behaviour of a “tantrum” as described above may be the following. It is hypothesized that the function of the behaviour tantrum is to escape demands. The behaviour is maintained by the demand being removed after the child begins to tantrum and the child not having to engage in the task. Possible predictors are demands and/or tasks the child has had difficulty with previously and/or new tasks that he or she find frustrating to complete without assistance.

The hypotheses may also contain information about the target behaviour for treatment and potential outcome of treatment. For example, the above hypothesis may conclude with the
following statement. “It is hypothesized that teaching the child to request help will increase engagement in tasks and/or demands and thereby decrease tantrums”.

At times after the functional assessment is completed, the information collected does not provide a clear indication about the function the target behaviour serves, or consistent patterns about the antecedents or consequences of the behaviour (O’Neill et al. 1997). Under these circumstances it may be necessary to conduct a functional analysis to determine or clarify the function of the target behaviour.
**Functional Analysis**

A functional analysis is designed to test the function of the target behaviour, what in the environment is reinforcing and/or maintaining the behaviour (Carr & Wilder, 2003). Stated another way the purpose of the functional analysis is to test the hypothesis generated from the information obtained in the functional assessment (O’Neill et al. 1997). Typically there are three basic conditions in a functional analysis, attention, escape (demand) and alone (Iwata, Roscoe, Zarcone & Richman, 2002). Another condition that can be included is a tangible (e.g. toys, food) condition (Kahng, Hendrickson, & Vu, 2000).

When conducting a functional analysis it is not necessary to test all conditions. Information obtained in the functional assessment can provide direction on which conditions to test. For instance results from the Motivation Assessment Scale may rank attention and tangible high. Thus testing these two conditions first would seem logical.

Ideally when conducting a functional analysis it is easier according to Glasberg (2005) if “two people are involved, one person to interact with the child and one to observe and record data” (p. 102). If this is not possible then other strategies need to be considered. For example, setting up a video camera to record the session and then watching the video later to record the data may be one option. If choosing to record the sessions there are a few items to consider. First, if there is someone outside the family, another child, permission to videotape the child will need to be obtained from the child’s parent/guardian. Second, if the child is not use to being video taped, it may be necessary to let the child get used to the presence of the camera before conducting a functional analysis condition.

As a functional analysis is an experiment it is important that all conditions in a session remain consistent, and that sessions are conducted in an area that is not distracting (Carr & Wilder, 2003). Sessions should typically run about 10-15 minutes and it is important to conduct more than one session per condition and to leave at least five minutes in between sessions (Carr & Wilder, 2003). During the functional analysis each time the target behaviour occurs, the behaviour is recorded and can be compared to other conditions and a control condition to determine what the function of the target behaviour is (Carr & Wilder, 2003). Meaning that if during the attention condition the target behaviour occurred 12 times, during the tangible condition 4 times and during the escape condition 3 times. Then as the behaviour occurred the most during the attention condition the function the target behaviour is probably attention. The condition in which the behaviour occurs the most can also be compared to the control condition. The behaviour should occur more in e.g. the attention condition then the control condition. If the target behaviour occurs most during the control condition then it may be necessary to run the conditions again, and if the same results are obtained, a consulting with a professional should be the next step.

The data collected on the target behaviour can be graphed to allow for an easier comparison of each condition. The information from the functional analysis will provide further evidence to support or not support the hypothesis about the function of the target behaviour, as well may provide direction on which communicative response to begin teaching.

There are a few items to consider prior to starting a functional analysis. Functional analysis though providing valuable evidence can be time consuming. Thus it is important that parents have adequate time in their schedules to conduct a functional analysis. Also, as a functional analysis involves reinforcing the target behaviour, a parent needs to feel comfortable doing this, as each incident of the behaviour needs to be consistently reinforced or the data
collected (e.g. the number of times the target behaviour occurs) will not be accurate. For the safety of the parent and child there are behaviours (e.g. self-injurious behaviours, aggressive behaviours that are directed towards others) for which only a trained professional should conduct a functional analysis. For this reason only attention, escape (demand), tangible and control conditions will be described below and not the alone condition.

**Control Condition**

In the control condition, no demands are placed on the child, they have access to a number of preferred items (e.g. toys), and the parent periodically (e.g. after every two minutes) provides attention to the child (Iwata, Roscoe, Zarcone, & Richman, 2002). Ideally, during the control condition the child should exhibit low rates of the target behaviour.

**Attention Condition**

In the attention condition, the child is provided a minimally preferred item to interact with, and the parent ignores the child until he or she engages in the target behaviour, and then the parent provides attention for approximately five seconds (Carr & Wilder, 2003). The attention provided can simply be a verbal statement, e.g. “stop that”, although the attention provided should be similar to what the parent would normally provide to the child. If attention is indeed the function maintaining the child’s behaviour then the incidents of behaviour should increase during the sessions.

**Escape/Demand and Tangible Condition**

In the escape/demand condition the child is given an instruction to complete a task (one he or she normally does not want to do). When the child engages in the target behaviour the task is removed for approximately thirty seconds and then the instruction is provided again (Carr & Wilder, 2003). As with the attention condition, if the function of the behaviour is to escape, then the incidents of the target behaviour should increase during the sessions. For the tangible condition, prior to the start of the session the child is provided access to a highly preferred item and then the item is removed and only given to the child (for approximately 30 seconds) when he or she exhibits the target behaviour (Carr & Wilder, 2003).

The functional analysis about the target behaviour will provide evidence that confirms or disconfirms the hypothesis. If after completing the functional analysis the function of the target behaviour is not clear and/or the data collected disproves the hypothesis, then further assessment needs to be done. It may be necessary to re-examine the information obtained in the functional assessment and/or to collect more information, as well as to verify that the functional analysis was conducted correctly.

If still unsure, the parents should then consider, consulting a professional. Make sure to bring along the information collected as it will be useful to the professional. If the function of the target behaviour has been determined through the functional assessment and analysis, the next step is to teach the child a communicative response that serves the same function as the target behaviour.
Functional Communication Training

With the functional assessment and analysis complete, the Functional Communication Training (FCT) sessions can be designed. There are two items left to complete prior to implementing these sessions. The first is to complete a reinforcer/preference assessment. The second item is to choose an appropriate communicative response.

Preference Assessment

Preference assessments are used to determine the reinforcers that are going to be most effective in helping teach the child the new communicative response (Durand, 1990). Ideally the reinforcers chosen should be as close to the natural consequence of the behaviour as possible (Durand, 1990). For instance if teaching a child to pick up their toys, the natural consequence would be praise for complying and completing the task, such as “What a great job, thanks for picking up your toys”.

In order for praise to work, the child needs to find praise reinforcing. For some children, the natural consequence for the behaviour e.g. praise is not a potent enough reinforcer. In this instance, items the child prefers are chosen rather than praise as it is assumed these items will be more reinforcing, for the child (Durand, 1990).

There are varying methods for conducting preference assessments. The decision as to which method to use depends on the individual being assessed. A preference assessment that takes into account a child with limited verbal abilities will be described here. To begin, one parent can interview another person in the child’s life (e.g. other parent, grandparents) about the child’s likes. Also the child can be observed and information collected about items (e.g. toys) they interact a lot with or foods they like.

After this is complete a list of the items the child seems to enjoy the most should be compiled. The list of items may contain both edible and nonedibles items. It is at the discretion of the parents whether to use edibles, though food for many can be a very powerful reinforcer. If using edibles there are a few guidelines to follow. First use small portions so that the child does not become full quickly or gains weight. Second, do not conduct the preference assessment (or other components of FCT that require the use of reinforcers) after the child has finished a meal. Food is not reinforcing if one is already full. Third it may be necessary to restrict the child’s access to the edible while conducting FCT to prevent the child from becoming easily satiated on the item and decreasing the items reinforcing value. This applies to nonedible items as well.

The next step is to conduct the preference assessment. Assessments can be brief, approximately five minutes (Roane, Vollmer, Ringdahl & Marcus, 1998). The assessment should be conducted in a room free of distractions. The child should be placed on the floor or seated at a table with the items in front and within reach. The child is allowed free access to the items for five minutes (Roane, Vollmer, Ringdahl & Marcus, 1998). During the five minute period the parent records which items the child eats the most or plays with the longest. One method to assess edibles may be to have equal amounts of each food item (e.g. six smarties, chips etc.) and then after the five minutes count what is left. To assess nonedibles, one can create a sheet with each item listed and place a check under an item each time the child interacts with the item. This method would be appropriate if the child did not interact with the items for long. Another method would be to use a stopwatch and time how long the child interacts with each item.
Preference assessments should be conducted prior to the start of each FCT session, to ensure the items used are preferred by the child at that particular session.

**Reinforcer Assessment**

To determine if an item is truly reinforcing to the child, after the preference assessment is complete a reinforcer assessment can be conducted. Simple speaking a reinforcer assessment involves providing the reinforcer as a consequence when the child engages in a behaviour (Roane, Vollmer, Ringdahl & Marcus, 1998). For instance prior to conducting the tangible condition of a functional analysis it may be necessary to conduct a reinforcer assessment. If the preferred item(s) are truly reinforcing then when the item is presented after the child engages in the behaviour, the behaviour should increase.

Another way to conduct a reinforcer assessment would be to place an item the child interacted with a lot during the preference assessment in view of the child. When the child approaches the item he or she must complete a task (e.g. one he or she is able to complete) prior to receiving the item (Roane, Vollmer, Ringdahl & Marcus, 1998). If the item is reinforcing the child will complete the task and will continue to approach and complete the task in order to receive the item. This method can also be used to help determine if one preferred item is more reinforcing than another. The child is presented with two preferred items and is required to perform the same task regardless of the item he or she approaches (Roane, Vollmer, Ringdahl & Marcus, 1998). The item the child approaches and works for more often can be considered more reinforcing.

Though it is advisable to conduct a preference assessment prior to the start of each FCT session, it may not be necessary to conduct a reinforcer assessment. A parent may determine fairly quickly if a the preferred item is acting as a good reinforcer. For example if the child uses the new communicative response and receives the preferred item, and then continues to use the response in order to obtain the item, then the preferred item is probably acting as an effective reinforcer. The last step prior to beginning a FCT session will be to choose the appropriate communicative response to teach the child.

**Choosing the Communicative Response**

As reviewed earlier, the type of communicative response can be words, pictures, or sign language. The type of response to teach will depend on the child. For a child with limited or no spoken words, verbal language may not be an appropriate type of communicative response with which to start. Another factor to consider is the child’s ability to emit the response chosen. If using words, it is important that the words spoken by the child are clearly understood by those around and not just by members of the child’s immediate family (Durand, 1990). If using sign language, the child also needs to have the dexterity to produce the sign and the ability to replicate the sign correctly, so that it would be easily understood by other people in the child’s environment (Durand, 1990). If choosing to use pictures, called picture exchange communication (PECS) it is important that a child be able to distinguish between pictures in order to provide the right picture for what the child is asking or wanting. Outlining all the steps necessary to teach PECS is beyond the scope of the current edition of the manual, for more information about PECS, see the list of additional sources after the reference list.
The child’s environment is another factor to consider when choosing the type of response. For instance, teaching a child to sign may not be an appropriate choice if there are a limited number of people in the child’s environment who understand sign language. Lastly, when choosing the type of response, starting simple is often the best option (Durand, 1990). Once a child has learned one type of communicative response may be possible to then teach another type. For instance a child who is first taught to point to a card to request a break, may later be taught to say the word “break”. Another reason for starting simple is that if the type of response is too difficult for the child, an increase in the problem behaviour can occur.

Once the type of response is chosen, the next step is to determine what exact type of communicative response to teach the child. The function of the problem behaviour will aid in determining the type of communicative response. If the function of the child’s behaviour is to escape, then teaching the child to request a break or ask for help may be the best choices. If the function is attention, then teaching “play with me” might be a reasonable option. It is also important to take the child’s age in and/or developmental level into consideration when selecting the specific type of response. It may be appropriate to teach a three-year-old to request a hug when wanting attention, while a different response may be more appropriate for an older child of thirteen.

**Functional Communication Training Sessions**

With the assessment complete, the function of the behaviour determined and the communicative response chosen, FCT sessions can now begin. While the ultimate goal is to have the child spontaneously provide the communicative response in all areas of his or her environment, e.g. school, home etc., the behaviour first needs to be taught (ideally an area that is quiet and free of distraction). When deciding on where to conduct these sessions, the response being taught may help in determining the area. For instance, if teaching “play” it may be more appropriate to conduct the sessions in the living room, especially if that is where the child usually plays rather than say the kitchen. Another factor to consider is where the problem behaviours are occurring. For example if the behaviour occurs in the kitchen when the child is at the table doing work, then FCT sessions should be conducted at the kitchen table.

As stated previously, prior to the start of the FCT sessions it is recommended that a preference assessment be completed, in order to ensure the items the child is working for are reinforcing and to help prevent the child becoming satiated on an item. The length of session will depend on the child. For younger children it is advisable to conduct short sessions e.g. ten minutes; for older children the sessions can be longer e.g. thirty minutes. If an increase in problem behaviours occurs towards the end of a session, then the session length may need to be reduced. An example of how to conduct FCT sessions to teach the child to request a break or help using two different communicative responses (picture and verbal) will be described.

**Requesting a Break or Help Sessions**

If the function of the child’s behaviour is escape, than teaching the child to request a break or ask for help may assist in decreasing the problem behaviour. Whether to teach the child to request a break or help will depend on the task presented to the child. If the problem behaviour generally occurs for behaviours the child knows how to do (already within the child’s behavioural repertoire) then teaching the child to request a break may be the appropriate option.
(Durand, 1990). If the behaviour occurs when the child is provided with a task or activity he or she finds difficult then teaching the child to request help may be more appropriate (Durand, 1990). Again the session should be conducted in an area where the behaviour usually occurs. Teaching a child to request a break from school work should be done where the child normally does the work, while teaching a child to request help when making his or her bed should be conducted in the child’s bedroom.

Another important piece of information is how long after the child is presented with the demand does the problem behaviours occur. This is important because when first teaching the child the communicative response a prompt is given for the child to provide the parent with the response. This prompt should be given prior to the start of the problem behaviour. If the child exhibits the problem behaviour thirty seconds after receiving the task then the prompt should be provided fifteen seconds after the child is given the task (Durand, 1990). Gradually, the length of time before the prompt is provided will be increased and the prompts faded. There are different types of prompts, physical, modeling and verbal. Ideally, it is best to start with the least intrusive prompt and then move to a more intrusive prompt if needed and then gradually fade the prompts entirely. For example when teaching a child to touch a picture icon to request a break, the child is first given a verbal prompt (least intrusive) to touch the picture. If the child fails to respond then a modeling prompt, where the parent models the behaviour by touch the icon may be used. If the child fails to respond then a physical prompt (most intrusive) may be used, where the parent takes the child’s hand and touches the child’s hand to the icon. To fade the physical prompt the parent would first release the child’s hand just before he or she touched the icon, then half way through the motion, and then the parent would just touch the child’s hand to prompt the child to touch the icon, and then only the verbal prompt would be used. Children with autism can often become prompt dependent, fading prompts can help avoid prompt dependence from occurring and increase the likelihood of spontaneous communication (Eichenbaum, 2008)

**Requesting a Break using Picture Communication**

A session for teaching a child to request a break using a picture icon could proceed as follows. The child is seated at the table (the picture just to the side within arms reach) and is presented with a piece of work to complete, such as a worksheet. While providing the child with the work, the parent may say, “It is homework time”. When first starting sessions chose an item that the child is able to complete within a short period of time. If the child normally exhibits the problem behaviour after thirty seconds of receiving the work then after fifteen seconds, the parent removes the sheet and provides a verbal prompt “If you want a break, point to the break picture”. If after five seconds the child does not respond, the parent can provide the verbal prompt again and model the behaviour by pointing to the picture. If the child still does not respond then the parent can repeat the verbal prompt, and gently take the child’s hand and move it towards the picture. Once the child has pointed to the picture, regardless if the parent had to physically guide the child, the child is provided a break. The break can be provided at the table for approximately thirty seconds to one minute. During the break the child may be provided with the preferred item. The parent may also indicate to the child that he or she has a specified amount of time to play with the item, before returning to the homework. If the parent is concerned that the removal of the item might result in an increase of behaviour, then the parent can interact with the child during the break. At the conclusion of the break, the child is presented with the worksheet again and the process continues. After another fifteen seconds has passed the parent
removes the worksheet and prompts the child. Each time the sheet is removed begin by providing the child with the verbal prompt, and then proceeding to use the other prompts if needed. It may take a couple sessions to reduce the prompts, how quickly the prompts are faded will depend on the child, and how consistent the parent is conducting the sessions. The end goal will be that the child will require no prompts and will spontaneously point to the break picture. At the end of the session provide the child with the preferred item to interact with. Each time the sheet is removed begin by providing the child with the verbal prompt, and then proceed to use the other prompts if needed. It may take a couple sessions to reduce the prompts, how quickly the prompts are faded will depend on the child. The end goal will be that the child will require no prompts and will spontaneously point to the break picture.

**How to Respond to the Target Behaviour**

During the session the parent has two options if the child exhibits the target behaviour. The first option is to place the problem behaviour on extinction, which means no longer providing reinforcement for the behaviour (Iwata & Wallace, 1999). In other words, the parent does not respond to the behaviour as he or she would normally, essentially ignoring the behaviour. In the example above, if the child engages in the problem behaviour, instead of allowing the child to leave the table (normal response); the parent would prompt the child to continue working. When the child stops the problem behaviour after about five seconds the parent can provide the prompt to point to the break picture.

If a parent decides to use extinction he or she must feel comfortable not responding to the target behaviour. As the parent needs to be consistent, and cannot ignore the behaviour one time and respond to the behaviour the next time. The other item to be aware of is that sometimes when a behaviour is placed on extinction, the frequency or duration will increase before it decreases, this is referred to as an extinction burst (Iwata & Wallace, 1999). If a parent does not feel comfortable using extinction, the second option is to respond to the problem behaviour as the parent would normally. Research has shown that FCT will work without extinction; it just may take longer for the child to learn the new communicative response (Kahng, Hendrickson & Vu, 2000).

**Requesting Help using Verbal Communication**

The same procedures described above would be used to teach a child to request help. The main difference is that when the child requests help, the parent is to provide the child with help. Teaching requesting help is used for activities that the child finds difficult. For instance if a parent is wanting a child to make his or her bed in the morning an FCT session teaching the child to say the word “help” may go as follows. First, the parent will want to determine at what point during the bed making process does the child exhibit the problem behaviour. For the purpose of this example, the child has difficulty pulling the comforter/quilt up. Just before the child gets to this step, the parent would provide a verbal prompt, “If you would like help, say help”. If after five seconds the child has not said the word “help” then the prompt can be provided again. Once the child says the word “help” the parent helps the child with the part of bed making that is difficult. As the child acquires the new communicative response the parent should be able to reduce the number of times the verbal prompt is given, and to help reduce the prompt even further the parent can shorten the sentence or only say part of the word help. For instance, the
parent might prompt the child by just saying “Say help”, or by sounding out the first part of the word “He _ _ _. At the end of the session the child should be praised for making his or her bed and if praise is not a strong enough reinforcer for the child, then a preferred item can be provided for the child to interact with. During the FCT sessions the parent should continue to record the occurrences of the target behaviour and parent may also want to keep track of the number and/or type of prompts used during a session.

**Evaluating the Success of Functional Communication Training Sessions**

It is important that parents are able to evaluate the success of FCT. One method for evaluating the success is to compare the data collected on the target behaviour (See section on Recording Frequency and Duration of the Target Behaviour) before implementing FCT procedures to the data collected on the target behaviour during and after FCT sessions. The data collected can be graphed providing a visual of whether a decrease in the target behaviour has occurred. As stated earlier a parent may also want to keep track of the prompts used during the sessions in order to determine whether a decrease in prompting is occurring. As sessions continue a parent may also want to record the number of times the child spontaneously uses the new communicative response.

These are just a few ways to evaluate the success of FCT. The information obtained from the above methods can also be used to determine if the sessions are not successful. If there is a concern that learning is not taking place then the parent will want to first look at how the sessions are being conducted and if the parent is being consistent or if a different maybe simpler response should be taught.

**Generalization**

Conducting FCT sessions in the child’s natural environment can assist in the generalization of the new behaviour in other communicative situations. In some cases, though generalization will need to be built into sessions. The child does not have to completely have mastered the new communicative response (e.g. emit the response spontaneously without prompts) in order for generalization to begin. To help with the generalization of having the child use a picture to request help, the help picture can be placed in areas around the house where the child might typically request help for instance in the bathroom, at the kitchen table, etc. After discussing the procedure with the child’s teacher the picture might also be placed on the child’s desk. Another way would be to progress from having the child point to the picture to having him or her bring the picture to the parent. The same procedures as previously described would be used, accept if using a physical prompt the parent would place the picture in the child’s hand and then guide the child’s hand to give the picture to the parent. The other item to keep in mind besides generalization is maintenance. In the beginning sessions should be conducted everyday, as the child acquires and uses the new communicative response the sessions can be thinned to every other day, a few times a week, once a week, once every two weeks etc. After which the parent may want to occasionally conduct a booster session, especially if he or she notices an increase in the target behaviour.
Summary

In summary, Functional Communication Training (FCT) is an ongoing process, as the child acquires responses, other communicative responses can be taught. The child can also be taught to distinguish between responses. For instance a child might be taught to distinguish between requesting a break and asking for help.

Providing a child with a functional means to communicate with the world around, can be a very rewarding and frustrating experience at the same time. As FCT and all its components can be a time consuming process, it is important that parents assess whether or not they have the time and energy to commit to caring out the procedure. Parents should also be realistic in their assessment of the severity of the behaviour and whether it may be more beneficial to themselves and the child if professional services are sought.

If the decision is made to conduct FCT the author of this manual would greatly appreciate that if at the completion of using this FCT manual, the Parent Satisfaction Sheet (Appendix F) could be completed and returned to the author in the envelope provided. Information obtained will be used to improve future editions of the manual.
References


Additional Sources


www.autismontario.com

http://www.pecs.com/Consultants.htm
Appendix A
Glossary
**Glossary**

**Autism:** Common neurological disorder, that includes deficits in social/skills interactions, impairments in communication, and restrictive, repetitive, and stereotyped patterns of behaviour, interests and activities (American Psychiatric Association, Diagnostic and Statistical Manual – IV, 1994).

**Antecedents:** An event that precedes the problem behaviour (Sulzer-Azaroff & Mayor, 1991).

**Consequence:** An event that follows the problem behaviour (Sulzer-Azaroff & Mayor, 1991).

**Duration:** Recording the time from when the behaviour starts till when it ends (Sulzer-Azaroff & Mayor, 1991).

**Frequency:** Recording the number of times the behaviour occurs (Sulzer-Azaroff & Mayor, 1991).

**Functional Analysis:** Designed to determine what is maintaining the problem behaviour and identifies cause-effect relations (Iwata & Worsdell, 2005).

**Functional Assessment:** about process for gathering information about the description of the problem behaviours, identification of the events, times, and situations that predict when the problem behaviour will or will not occur, identification of the consequences that maintain the problem behaviour, development of one or more hypothesis, and collection of direct observation data (O’Neill et al. 1997).

**Functional Communication Training:** A behavioural procedure that utilizes functional assessment methods and functional analysis to determine the function of the disruptive behaviour. Once the function is determined then an alternative behaviour in the form of a communicative response is taught to replace the disruptive behaviour (Durand & Merges, 2001).

**Reinforcing:** An event that follows the problem behaviour and in turn strengthens the behaviour, such that the behaviour increases and the behaviour continues to occur (Sulzer-Azaroff & Mayor, 1991).
Appendix B
Motivation Assessment Scale
Motivation Assessment Scale

Name: _____________________________ Rater: __________________ Date:________

Description of Behavior (be specific):

Instructors: The MAS is a questionnaire designed to identify those situations where an individual is likely to behave in specific ways. From this information, more informed decisions can be made about the selections of appropriate replacement behaviors. To complete the MAS, select one behavior of specific interest. Be specific about the behavior. For example “is aggressive” is not as good a description as “hits other people.” Once you have specified the behavior to be rated, read each question carefully and circle the one number that best describes your observations of this behavior.

<table>
<thead>
<tr>
<th>Questions</th>
<th>Never 0</th>
<th>Almost Never 1</th>
<th>Seldom 2</th>
<th>Half the Time 3</th>
<th>Usually 4</th>
<th>Almost Always 5</th>
<th>Always 6</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Would the behavior occur continuously if this person was left alone for long periods of time?</td>
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<td>2. Does the behavior occur following a request to perform a difficult task?</td>
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<td>3. Does the behavior seem to occur in response to your talking to other persons in the room/area?</td>
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<td>4. Does the behavior ever occur to get a toy, food, or an activity that this person has been told he/she can’t have?</td>
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<td>5. Would the behavior occur repeatedly, in the same way, for long periods of time if the person was alone? (e.g. rocking back and forth for over an hour.)</td>
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<td>6. Does the behavior occur when any request is made of this person?</td>
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<td>7. Does the behavior occur whenever you stop attending to this person?</td>
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<td>8. Does the behavior occur when you take away a favorite food, toy or activity?</td>
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<td>9. Does it appear to you that the person enjoys doing the behavior? (It feels, tastes, looks, smells, sounds pleasing).</td>
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</tbody>
</table>
10. Does this person seem to do the behavior to upset or annoy you when you are trying to get him/her to do what you ask?

11. Does this person seem to do the behavior to upset or annoy you when you are not paying attention to him/her? (e.g. you are in another room or interacting with another person)

12. Does the behavior stop occurring shortly after you give the person food, toy, or requested activity?

13. When the behavior is occurring does this person seem calm and unaware of anything else going on around her/him?

14. Does the behavior stop occurring shortly after (one to five minutes) you stop working with or making demands of this person?

15. Does this person seem to do the behavior to get you to spend some time with her/him?

16. Does the behavior seem to occur when this person has been told that he/she can’t do something he/she had wanted to do?

<table>
<thead>
<tr>
<th>Sensory</th>
<th>Escape</th>
<th>Attention</th>
<th>Tangible</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>2.</td>
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<td>13.</td>
<td>14.</td>
<td>15.</td>
<td>16.</td>
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</table>

Total Score =
Mean Score =
Relative Ranking =

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Appendix C
Functional Assessment Interview
FUNCTIONAL ASSESSMENT INTERVIEW (FAI)

Person of concern ______________________ Age ___________ Sex M F
Date of interview ______________________ Interviewer ______________________
Respondents ______________________

A. DESCRIBE THE BEHAVIORS.

1. For each of the behaviors of concern, define the topography (how it is performed), frequency (how often it occurs per day, week, or month), duration (how long it lasts when it occurs), and intensity (how damaging or destructive the behaviors are when they occur).

<table>
<thead>
<tr>
<th>Behavior</th>
<th>Topography</th>
<th>Frequency</th>
<th>Duration</th>
<th>Intensity</th>
</tr>
</thead>
<tbody>
<tr>
<td>a.</td>
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<td>i.</td>
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<td>j.</td>
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</table>

2. Which of the behaviors described above are likely to occur together in some way? Do they occur about the same time? In some kind of predictable sequence or "chain"? In response to the same type of situation?
B. DEFINE ECOLOGICAL EVENTS (SETTING EVENTS) THAT PREDICT OR SET UP THE
PROBLEM BEHAVIORS.

1. What medications is the person taking (if any), and how do you believe these may affect his
or her behavior?

_________________________________________________________________________

_________________________________________________________________________

2. What medical or physical conditions (if any) does the person experience that may affect his
or her behavior (e.g., asthma, allergies, rashes, sinus infections, seizures, problems related
to menstruation)?

_________________________________________________________________________

_________________________________________________________________________

3. Describe the sleep patterns of the individual and the extent to which these patterns may
affect his or her behavior.

_________________________________________________________________________

_________________________________________________________________________

4. Describe the eating routines and diet of the person and the extent to which these may affect
his or her behavior.

_________________________________________________________________________

_________________________________________________________________________

5a. Briefly list below the person's typical daily schedule of activities. (Check the boxes by those
activities the person enjoys and those activities most associated with problems.)

<table>
<thead>
<tr>
<th>Time</th>
<th>Enjoy</th>
<th>Problems</th>
<th>Time</th>
<th>Enjoy</th>
<th>Problems</th>
</tr>
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<tbody>
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<td>6:00</td>
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<td>9:00</td>
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</table>
5b. To what extent are the activities on the daily schedule predictable for the person, with regard to what will be happening, when it will occur, with whom, and for how long?

5c. To what extent does the person have the opportunity during the day to make choices about his or her activities and reinforcing events? (e.g., food, clothing, social companions, leisure activities)

6. How many other persons are typically around the individual at home, school, or work (including staff, classmates, and housemates)? Does the person typically seem bothered in situations that are more crowded and noisy?

7. What is the pattern of staffing support that the person receives in home, school, work, and other settings (e.g., 1:1, 2:1)? Do you believe that the number of staff, the training of staff, or their social interactions with the person affect the problem behaviors?

C. DEFINE SPECIFIC IMMEDIATE ANTECEDENT EVENTS THAT PREDICT WHEN THE BEHAVIORS ARE LIKELY AND NOT LIKELY TO OCCUR.
1. Times of Day: When are the behaviors most and least likely to happen?
   Most likely: ____________________________________________________________
   Least likely: __________________________________________________________
2. **Settings**: *Where* are the behaviors most and least likely to happen?
   Most likely: ________________________________________________
   Least likely: ______________________________________________

3. **People**: *With whom* are the behaviors most and least likely to happen?
   Most likely: ________________________________________________
   Least likely: ______________________________________________

4. **Activity**: *What activities* are most and least likely to produce the behaviors?
   Most likely: ________________________________________________
   Least likely: ______________________________________________

5. Are there particular or idiosyncratic situations or events not listed above that sometimes seem to “set off” the behaviors, such as particular demands, noises, lights, clothing?
   _________________________________________________________

6. What *one thing* could you do that would most likely make the undesirable behaviors occur?
   _________________________________________________________

7. Briefly describe how the person’s behavior would be affected if . . .
   a. You asked him or her to perform a difficult task.
   _________________________________________________________

   b. You interrupted a desired activity, such as eating ice cream or watching TV.
   _________________________________________________________

   c. You unexpectedly changed his or her typical routine or schedule of activities.
   _________________________________________________________
d. She or he wanted something but wasn’t able to get it (e.g., a food item up on a shelf).


e. You didn’t pay attention to the person or left her or him alone for a while (e.g., 15 minutes).


**D. IDENTIFY THE CONSEQUENCES OR OUTCOMES OF THE PROBLEM BEHAVIORS THAT MAY BE MAINTAINING THEM (I.E., THE FUNCTIONS THEY SERVE FOR THE PERSON IN PARTICULAR SITUATIONS).**

1. Think of each of the behaviors listed in Section A, and try to identify the specific consequences or outcomes the person gets when the behaviors occur in different situations.

<table>
<thead>
<tr>
<th>Behavior</th>
<th>Particular situations</th>
<th>What exactly does he or she get?</th>
<th>What exactly does she or he avoid?</th>
</tr>
</thead>
<tbody>
<tr>
<td>a.</td>
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<td>b.</td>
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<td>h.</td>
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<tr>
<td>i.</td>
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<tr>
<td>j.</td>
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</table>

**E. CONSIDER THE OVERALL EFFICIENCY OF THE PROBLEM BEHAVIORS. EFFICIENCY IS THE COMBINED RESULT OF (A) HOW MUCH PHYSICAL EFFORT IS REQUIRED, (B) HOW OFTEN THE BEHAVIOR IS PERFORMED BEFORE IT IS REWARDED, AND (C) HOW LONG THE PERSON MUST WAIT TO GET THE REWARD.**

<table>
<thead>
<tr>
<th>Low Efficiency</th>
<th>High Efficiency</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 2 3 4 5</td>
<td>1 2 3 4 5</td>
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<td>1 2 3 4 5</td>
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<td>1 2 3 4 5</td>
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</table>

5
F. WHAT FUNCTIONAL ALTERNATIVE BEHAVIORS DOES THE PERSON ALREADY KNOW HOW TO DO?

1. What socially appropriate behaviors or skills can the person already perform that may generate the same outcomes or reinforcers produced by the problem behaviors?

G. WHAT ARE THE PRIMARY WAYS THE PERSON COMMUNICATES WITH OTHER PEOPLE?

1. What are the general expressive communication strategies used by or available to the person? These might include vocal speech, signs/gestures, communication boards/boards, or electronic devices. How consistently are the strategies used?

2. On the following chart, indicate the behaviors the person uses to achieve the communicative outcomes listed:

<table>
<thead>
<tr>
<th>Communicative Functions</th>
<th>Complex speech (sentences)</th>
<th>Multiple-word phrases</th>
<th>One-word utterances</th>
<th>Echolalia</th>
<th>Other vocalizing</th>
<th>Complex signing</th>
<th>Pointing</th>
<th>Leading</th>
<th>Slapping head</th>
<th>Grab/thumb</th>
<th>Give objects</th>
<th>Increased movement</th>
<th>Moved away from you</th>
<th>Moved away from me</th>
<th>Sat up</th>
<th>Sat up</th>
<th>Eat</th>
<th>Drink</th>
<th>Sleep</th>
<th>Walk</th>
<th>Tact</th>
<th>Aggression</th>
<th>Self-injury</th>
<th>Other</th>
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<tbody>
<tr>
<td>Request attention</td>
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<td>Request help</td>
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<td>Request preferred food/objects/activities</td>
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<td>Request break</td>
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<td>Show you something or some place</td>
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<tr>
<td>Indicate physical pain (headache, illness)</td>
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<td>Indicate confusion or unhappiness</td>
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<td>Protest or reject a situation or activity</td>
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</table>
3. With regard to the person's receptive communication, or ability to understand other persons...  
a. Does the person follow spoken requests or instructions? If so, approximately how many?  
(List if only a few.)

b. Does the person respond to signed or gestural requests or instructions? If so, approximately how many? (List if only a few.)

c. Is the person able to imitate if you provide physical models for various tasks or activities?  
(List if only a few.)

d. How does the person typically indicate yes or no when asked if she or he wants something,  
wants to go somewhere, and so on?

H. WHAT ARE THINGS YOU SHOULD DO AND THINGS YOU SHOULD AVOID IN WORKING  
WITH AND SUPPORTING THIS PERSON?  
1. What things can you do to improve the likelihood that a teaching session or other activity  
will go well with this person?

2. What things should you avoid that might interfere with or disrupt a teaching session or activity  
with this person?

I. WHAT ARE THINGS THE PERSON LIKES AND ARE REINFORCING FOR HIM OR HER?  
1. Food items:
2. Toys and objects: 

3. Activities at home: 

4. Activities/outing in the community: 

5. Other: 

J. WHAT DO YOU KNOW ABOUT THE HISTORY OF THE UNDESIRABLE BEHAVIORS, THE PROGRAMS THAT HAVE BEEN ATTEMPTED TO DECREASE OR ELIMINATE THEM, AND THE EFFECTS OF THOSE PROGRAMS?

<table>
<thead>
<tr>
<th>Behavior</th>
<th>How long has this been a problem?</th>
<th>Programs</th>
<th>Effects</th>
</tr>
</thead>
<tbody>
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<td>10.</td>
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</tbody>
</table>
K. DEVELOP SUMMARY STATEMENTS FOR EACH MAJOR PREDICTOR AND/OR CONSEQUENCE.

<table>
<thead>
<tr>
<th>Distant Setting Event</th>
<th>Immediate Antecedent (Predictor)</th>
<th>Problem Behavior</th>
<th>Maintaining Consequence</th>
</tr>
</thead>
<tbody>
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</tbody>
</table>

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Appendix D
ABC Chart
<table>
<thead>
<tr>
<th>Date/Time</th>
<th>Antecedent</th>
<th>Behaviour</th>
<th>Consequence</th>
<th>Perceived Function</th>
</tr>
</thead>
<tbody>
<tr>
<td>01/04/08</td>
<td><strong>Phone rings and parent goes to answer</strong></td>
<td><strong>Child begins to tantrum (kicks, screams)</strong></td>
<td><strong>Parent comes back and comforts the child</strong></td>
<td><strong>attention</strong></td>
</tr>
<tr>
<td>10:30 am</td>
<td></td>
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</tr>
</tbody>
</table>
Appendix E
Frequency and Duration Recording Sheets
## Frequency and Duration Recording Sheets

### Frequency Recording

<table>
<thead>
<tr>
<th>Observation Period</th>
<th>Monday</th>
<th>Tuesday</th>
</tr>
</thead>
<tbody>
<tr>
<td>9:30 – 9:40</td>
<td></td>
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<tr>
<td>11:15 – 11:24</td>
<td></td>
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</tbody>
</table>

### Duration Recording

<table>
<thead>
<tr>
<th>Observation Period</th>
<th>Monday</th>
<th>Tuesday</th>
</tr>
</thead>
<tbody>
<tr>
<td>9:00 – 10:00</td>
<td>15mins 32 seconds</td>
<td></td>
</tr>
<tr>
<td>12:00 – 1:00</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Appendix F
Graph of Frequency Recording
Graph of Frequency Recording
Appendix G
FCT Manual Parent Satisfaction Questionnaire
The Parent Satisfaction Questionnaire for the users of the Functional Communication Training Manual for Parents of Children with Autism is designed to provide feedback that will be used to improve future editions of the manual. The questionnaire consists of five questions rated on a scale of 1 to 5 (with one meaning strongly disagree and five meaning strongly agree) and three written answer questions.

Please circle the number that best describes your response to the following five statements.

<table>
<thead>
<tr>
<th></th>
<th>Strongly Disagree</th>
<th>Disagree</th>
<th>Neutral</th>
<th>Agree</th>
<th>Strongly Agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. The manual is well organized</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>2. The manual is easy to read and understand.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>3. The manual clearly defined concepts.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
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<tr>
<td>4. The manual provided good examples to help explain the concepts described.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>5. As a parent were you able to implement the concepts described with success.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
</tbody>
</table>

Please provide written answers to the following three questions.

1. Describe the area(s) of the manual that are the most helpful, strengths of the manual.

2. Describe the area(s) of the manual that are the least helpful, weaknesses of the manual.

3. Describe the concept of the manual that needs to be explained more clearly.

Additional Comments:

Please mail this complete and mail this form to Marie-Line Jobin St. Lawrence College 100 Portsmouth Avenue Kingston, Ontario K7L 5A6.

Thank you,
A. Thompson
Appendix B: Email for Permission to use the Functional Assessment Interview

From Rob Horner <robh@uoregon.edu>
To Amanda Thompson <abthompson24@gmail.com>,

Date Feb 11, 2008 9:06 PM
Subject RE: Functional Assessment Interview
mailed-byuoregon.edu

Amanda

You have our permission to use the FAI. Good luck with your thesis. Let us know what you find

Rob Horner
Appendix C: Email for Permission to use the Motivation Assessment Scale

From Durand, V. Mark <VDurand@spadmin.usf.edu>

To Amanda Thompson <abthompson24@gmail.com>,

Date Thu, Feb 14, 2008 at 11:16 AM

Subject RE: Motivation Assessment Scale

mailed-byspadmin.usf.edu

You have my permission.

Mark Durand

----------------------------------------------

V. Mark Durand, Ph.D.
Professor of Psychology, TER 404
University of South Florida St. Petersburg
140 Seventh Avenue South
St. Petersburg, FL 33701-5016
Email: mdurand@stpt.usf.edu