Implementing Positive Reinforcement in Combination with Collaborative Problem Solving in the Treatment of Off-Task Behaviour during Independent Work Time

by

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DEDICATION

I would like to dedicate this thesis to my friends and family who have supported me throughout my academic career.
ABSTRACT

There has been little research on using a combination of positive reinforcement with the collaborative problem solving model (CPS) in the treatment of children diagnosed with behavioural disorders. The use of positive reinforcement in combination with the CPS model was used to increase on-task behaviour in an 8-year-old boy diagnosed with oppositional defiant disorder (ODD) and attention deficit hyperactivity disorder (ADHD). The client entered the agency’s day treatment school-based facility because of his unmanageable aggressive behaviour while attending his regular community school. A functional assessment of the child’s off-task behaviour supported that attention from the teacher was the function. Based on the functional assessment a treatment procedure of positive reinforcement for on task behaviours was chosen. The agency’s primary model for intervention was the CPS approach which has been gaining popularity in school-based programs throughout Canada. Because of the agency’s mandate CPS was used in combination with positive reinforcement to increase the client’s on-task behaviour during his language arts block. This thesis provides evidence that CPS and positive reinforcement interventions can be used in combination to increase on-task behaviour in children with conduct disorders.
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Chapter 1. Introduction

Overview

Oppositional Defiant Disorder (ODD) is quite common among children in all societies. Characteristics of ODD in children can be defined as high levels of disobedience, intransigent, noncompliant, hostile and/or aggressive behaviour (Hazell, 2010). Children with ODD are at higher risk of developing social and emotional problems such as: low self-esteem, rejection from classmates, teachers and family members (Larsson, Fossum, Drugli, Handegard, & Morch, 2009). It was suggested by Loeber, Burke, and Pardini (2009), that when children with the diagnosis of ODD are diagnosed at a young age, symptoms generally fade away by adolescence; although, if their defiant and aggressive behaviours are allowed to continue without subsequent intervention or treatment, it can prolong their maladaptive behaviour past childhood, into adolescence, and even into adulthood. These children run the risk of continuing to have difficulty integrating into society, which can lead them to progressively become more antisocial, prone to anxiety disorders, delinquency, and heightened risk of drug and alcohol abuse (Loeber, et al., 2009).

According to Greene and Ablon (2006), children with ODD present with behaviours which interfere with treatment, intervention, and school-based programs. These children tend to have a high rate of school failure, are reading below average, score lower on standardized testing, and have general academic difficulty throughout their education, as well as engaging in poor relationships with peers and educational staff (Lier, Muthen, Van de Sar, & Crijnen., 2004).

According to Davidson, Blankstein, Flett, and Neale (2008) attention-deficit/hyperactivity disorder (ADHD) is a disorder primarily diagnosed in childhood. The authors describe these children as always in motion, constantly talking, erratic, bossy, having difficulty concentrating, and controlling their behaviour (Davidson, et, al., 2008). These symptoms make school and classroom expectations like sitting still and listening to and following instructions very difficult. Many of these children find it challenging to establish friendships and student-peer relationships, mostly because their behaviour can seem aggressive and/or annoying to others (Davidson, et. al. 2008). These symptoms interfere with academic progress, increasing the rates of dropping out of school and developing anti-social relationships with peers (Davidson, et. al. 2008).

Many researchers have effectively shown that classroom based interventions have positive effects on learning and behaviour in children with ODD (Sutherland, Snyder, Al-Hendawi, & Vo., 2008). According to Greene and Ablon (2006), Collaborative Problem Solving (CPS) has become the primary approach in the standard of care for children with behavioural disorders. CPS focuses on identifying the child’s triggers and cognitive and emotional deficits which contribute to his/her behavioural difficulties and then working collaboratively with the child, helping professionals, and the child’s parents to create solutions through an organized treatment plan (Ablon & Greene, 2006).

Reinforcement procedures have also been shown to be an effective treatment method for increasing on-task behaviour in school settings (Bouxsein, Roane, & Harper, 2011). Studies have been conducted evaluating the use of positive reinforcement as an intervention in increasing on-task and compliance in school settings, many showing the
effectiveness and support for the method (Bouxsein, et al, 2011). Kodak, Lerman, Volkert and Trosclair, N. (2007) examined the preference of positive vs. negative reinforcement in treating problem behaviour in children and found that positive reinforcement was more effective. In the study conducted by Hall, Lund & Jackson, (1968) the authors tested positive reinforcement through teacher attention on study behaviour for children with problem behaviour. Results from the study indicated that positive reinforcement through the use of teacher attention was an effective treatment in increasing the study behaviour in all participates.

**Hypothesis.** It is hypothesized that the participant’s on-task behaviour would increase through the use of positive reinforcement in combination with CPS.

**Rational.** To date, there is limited research in the application of the collaborative problem solving model and no current research on the CPS approach in combination with other models of intervention. Thus, the objective of this study is to provide evidence that CPS in combination with positive reinforcement can be an effective form of treatment for children with behavioural challenges in increasing on-task behaviour.
Chapter 2. Literature Review

Attention-Deficit/Hyperactivity Disorder

Davidson, et. al, (2008) Attention-deficit/hyperactivity disorder (ADHD) according to is a disorder primarily diagnosed in childhood. The authors describe these children as always in motion, constantly talking, erratic, bossy, have difficulty concentrating, and controlling their behaviour (Davidson, et. al., 2008). These symptoms make school and classroom expectations like sitting still and listen/follow instructions very difficult (Davidson, et. al. 2008). Many of these children find it challenging to establish friendships and student-peer relationships, mostly because their behaviour can seem aggressive and/or annoying to others (Davidson, et. al. 2008). These symptoms interfere with academic progress, increasing the rates of dropping out of school and developing anti-social relationships with peers (Davidson, et. al. 2008).

According to Kidd (2000), children diagnosed with ADHD, medical management is the primary treatment for these children. The author proposed the need for alternatives to the medical management as there is limited longitudinal and long-term studies depicting the potential adverse side-effects inflicted by the intensive stimulant medication given to these young children over time.

Oppositional Defiant Disorder

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According to Greene and Ablon (2006), children with ODD present with behaviours which interfere with treatment, intervention, and school-based programs. These children tend to have a high rate of school failure, are reading below average, score lower on standardized testing, and have general academic difficulty throughout their education, as well as engaging in poor relationships with peers and educational staff (Liet et. al., 2004).

There is evidence supporting the correlation between conduct disorders and socioeconomic conditions, political and community based programs strive to alleviate the imbalance between economic classes. However, more recent studies support
psychological and family factors to be the primary cause of conduct disorders in children diagnosed with conduct disorders (Davidson et. al. 2008).

Oppositional defiant disorder comorbid with attention-deficit/hyperactivity disorder have been linked in studies, although, there is substantial literature concerning children with ADHD and very little studies concerning these children with comorbid diagnoses of behavioural disorders like conduct disorders or ODD. Davidson et. al. (2008) referred to the comorbidity between ODD and ADHD in their book THIRD CANADIAN EDITION, ABNORMAL PSYCHOLOGY. The authors describe children with both disorders as being at very high risk of delinquency and can lead to adult psychopathic behaviours later on in life. The authors suggest that the diagnosis of ADHD possibly comes first which brings anti-social interactions with peers and adults, resulting in the child feeling attacked and misunderstood. Feeling like this can motivate the child into acting hostile and aggressive, leading to a second diagnosis of a conduct disorder (Davidson et. al., 2008).

Hazell’s Review of Attention-deficit/hyperactivity Comorbid with Oppositional Defiant Disorder (2010) suggests that with the high levels of comorbidity between the ADHD and ODD diagnosis, upon every assessment for ADHD an assessment for ODD should be done automatically. As more literature surfaces on the comorbidity of these two diagnoses studies have recently started to identify genetic influences common to both disorders in twin studies (Acosta, Castellanos, Bolton et. al., 2008).

Because children diagnosed with ADHD and ODD tend to encompass the worst symptoms from both the disorders these children and adolescents frequently find themselves involved in the juvenile system (Davidson, et. al., 2008). The unfortunate connection between these young individuals and the psychopaths of tomorrow demonstrates the risk factors present and the need for early intervention.

**Collaborative Problem Solving Model**

Many researchers have effectively shown that classroom based interventions have positive effects on learning and behaviour in children with ODD (Sutherland, et. al., 2008). According to Greene and Ablon (2006), Collaborative Problem Solving (CPS) has become the primary approach in the standard of care for children with behavioural disorders. CPS focuses on identifying the child’s triggers and cognitive and emotional deficits which contribute to his/her behavioural difficulties and then working collaboratively with the child, helping professionals, and the child’s parents to create solutions through an organized treatment plan (Greene & Ablon, 2006).

The (CPS) model was first introduced by Dr. Ross Greene in his book The Explosive Child (2005). Dr. Greene is Director of Cognitive Behavioral Psychology at the Clinical and Research Program in Pediatric Psychopharmacology at Massachusetts General Hospital and developed CPS approach to train parents how to help their children who have behavioural difficulties. Greene coins the term an Explosive Child when talking about children struggling with mental health that display their struggles through behavioural outbursts, aggressive tendencies, defiance, willfulness, and raging. The focus of CPS according to Greene is that Children do as well as they can, meaning if a
child could do well, they would do well. CPS is a cognitive-behavioural approach to treating maladaptive child and adolescent behaviour. The model, as described by Greene (2005), identifies lacking cognitive skills in flexibility, frustration tolerance, and problem solving to be the cause of maladaptive behaviour in children and adolescents. CPS has been traditionally used in treating aggressive and defiant behaviour in children and adolescents. However, there have been gains in using this approach in varying other clinical populations.

Martin, Krieg, Esposito, Stubbe, and Cardona (2008), conducted a study examining the rates of restraint and seclusion in 755 hospitalized children before and after the implementation of the CPS model of intervention. Children committed to the hospital had varying mental diagnoses and while staying at the psychiatric institute displayed high rates of restraint and seclusion “episodes” (2008). Restraints consisted of being strapped to ones bed by leather or Velcro straps, a seclusion episode consisted of being locked in a padded cell or “safe room” (2008). The hypothesis of the study was that implementing the CPS model of intervention into regular, consistent psychiatric treatment would decrease the patient’s aggressive outbursts (2008). CPS training was given to all staff at the psychiatric ward at the beginning of treatment as well as twice-a-week supervision sessions where staff would discuss children and some difficult behaviours they encountered during the week with 12 other staff members and the developers of the model (2008). Results of the study indicated that the implementation of the CPS model reduced the instances of restraint and seclusion by 37.6-fold reduction (2008). Not only did treatment show a significant decline, after the 18-month follow-up period rates of restraint and seclusion were even lower (2008).

**Positive Reinforcement Procedures**

Reinforcement procedures have been used in many clinical settings and in many different ways (Austin, & Soeda, (2008), Broden, Bruce, Mitchell, Carter, & Hall, (1970), Conroy, Sutherland, Snyder, Al-Hendawi, & Vo, (2009), Hall, Lund, & Jackson, (1968), Kodak, Lerman, Volkert, & Trosclair, (2007)). Marchant, and Anderson’s study (2012) on positive reinforcement in the use of praise showed that not only did teacher praise increase the social and academic outcomes of the students in the study but also reduced teacher stress, leading to a stronger teacher-to-student relationship. Children that display behavioural challenges often have difficulties building social-peer relationships, student-teacher relationships, as well as excelling in academic work during their time at school. Often teachers in these settings feel stress and emotional exhaustion from the constant reprimanding of problem behaviour, enhancing the negative student-teacher relationship (Maydon, and Musti-Rai, 2011). Often times these children’s problem behaviour can be misinterpreted as deliberate defiance and lack of respect for the schooling process. Evidence suggests that these children show a higher risk of being exceptionally influenced by the teacher-student dynamic (Marchant and Anderson 2012). This study conducted by Marchant and Anderson showed support that positive reinforcement in the use of teacher praise can help create stronger student-teacher...
relationships, decrease teacher stress and increase task-performance/academic achievement, through consistent verbal praise for on-task behaviour during academic work-time.

Positive reinforcement has been used in many school-based interventions to increase study behaviour. It is often chosen for school-based interventions because it is easy to incorporate into teaching schedules, easy to globalize to many students simultaneously, and does not take a lot of time away from teaching the school curriculum (Hall, et. al., 1968). Hall, et. al., (1968) examination of teacher attention used as reinforcement for increasing study behaviour in six children with high rates of disruptive and challenging behaviour in a grade one and three classroom provided further evidence of the benefits of reinforcement procedures in classroom settings. Through teacher training, positive reinforcement was given through verbal praise such as “great work”, “I can see you are working hard” when students displayed study behaviours throughout the school day (Hall, et. al., 1968). Teachers delivered positive reinforcement upon every instance of study behaviour during the treatment phases and dramatic increases in task completion was demonstrated after a short time of implementation (Hall, et. al., 1968). All six students showed great improvement in study behaviour and all showed a drastic decrease in disruptive problem behaviour (Hall, et. al., 1968).

Reinforcement procedures have also been shown to be an effective treatment method in increasing on-task behaviour in school settings (Bouxsein, Roane, Harper, 2011). Many studies have been conducted evaluating the use of positive reinforcement as an intervention in increasing on-task and compliance in school settings, many showing the effectiveness and support for the method (Bouxsein, et al, 2011). Bouxsein, et al., (2011), compared the use of positive and negative reinforcement in increasing on-task compliance in a 14-year old boy, the authors found that noncontingent positive reinforcement was an effective treatment.
Chapter 3. Method

Description of Setting and Services

The setting of the study consisted of a day treatment school-based program. The program runs through an agency funded by the Ministry of Health, but is located in a classroom within the elementary Catholic School Board. Although the classroom is within a typical elementary school, the class itself is run using the CPS model while following the Board of Education’s curriculum for grade 4 – 5. The classroom currently has six students in total but has a maximum capacity of 12 students. There are four helping professionals working in the school-based day program which consists of: a board certified school teacher, an educational assistant, a child and youth worker and the student researcher. The usual day for the school-based program begins at 8:45am and ends at 2:15pm Monday to Friday.

The agency is a children’s mental health centre that provides service for children up to the age of 12 and their families. This agency provides treatment and counseling for child and the family ranging with services from clinical services, in-home treatment and support, and day treatment and school based treatment.

Participant. Erik Wallace¹, an 8-year-old boy, attends a grade 4 program in a day treatment classroom 5 days a week. Erik lives in an urban community with his grandmother. Erik has a diagnosis of ADHD and ODD and takes 5mg of Concerta OD. It has been documented that Erik also suffers from global anxiety and separation anxiety. Erik participated in art therapy for one year. He takes Risperidone and Biphenton medication in the mornings before he leaves his apartment. He has had modified school days in grade one. In grade two Erik received assistance from a school social worker, behaviour support programs (Itinerant Educational Assistant Three Day Intervention), involvement with CHEO-Mental Health Outpatient Services, in school support of a Child and Youth Worker student, Individualized Education Plan (IEP) with alternative behaviour expectations, multi-disciplinary team support, and counselling/therapy with the Catholic Family Services.

The participant has had a psycho-educational assessment in 2011, but the tests were inconclusive for the reason that the participant’s behavioural disruptions during testing rendered the tests moot. Educational assessments suggest that he is at the Grade Four grade level.

Erik was referred to the agency by the Ottawa-Carleton District School Board (OCDSB) for his disruptive, aggressive behaviour, as well as overall academic underachievement. School reports indicate that Erik exhibits severe aggressive behaviour and uses sexualized language towards school staff and peers. The OCDSB has recorded that he often avoids work, is physically/verbally aggressive, and has a history of running away from the classroom and school yard, as well as hiding within the school. It was reported that in a school setting he often displays disruptive, non-compliant, defiant behaviour to classroom tasks and activities. He has great difficulty waiting in line,
dealing with deviations in routines and has great challenges with transitions. Staff report that Erik is easily distracted, and is prone to outbursts. On the playground he has a tendency to make-up false stories to get others into trouble, has been known to bully others, and physically/verbally intimidate peers.

Design

Changing criterion design. Hartmann and Hall (1976) describes that the changing criterion design is a preferred choice of design when a reverse to baseline or multiple-baseline is either unsuitable or unethical design to use. The changing criterion design is a branch off of a multiple-baseline design consisting of different treatment phases that increase gradually over-time. As the criteria for intervention for the target behaviour changes and increases, the previous phase offers the baseline for the current phase and so on until the objectives have been reached (Hartmann & Hall, 1976).

Target Behaviour and Operational Definition

Target Behaviour:

On Task (Accelerate): On-task behaviour starts when Erik is sitting in his assigned seat for the task, listening to instructions, and initiating the task independently. Erik is said to be on-task when he is reading or writing material that is related to the schoolwork, or asking for assistance from the teacher or staff. Because of Erik’s ADHD he will not be expected to be sitting properly in his seat as long as he is being attentive/or working on the task.

On-task behaviour will not be recorded if Erik is talking to peers, scribbling/drawing on worksheets, getting up from his assigned seat, refusing to do the task, or arms crossed and head down on desk. Exceptions will be made if someone enters the classroom and Erik becomes momentarily distracted, or if he is waiting for assistance from staff.

Rational. Increasing Erik’s on-task behaviour will allow him to be more successful in his studies and ensure a more productive academic school year. It is immensely important that he be able to complete academic work independently so that when he is incorporated back into his community school he can succeed and work at the same level as his peers without the one-to-one staff support. His disruptive behaviour and out-burst in class can cause distraction and obtains staff attention, taking the focus away from other students who may benefit from staff assistance.

Assessment

Classroom/school ecology assessment. A classroom/school ecology assessment was used to identify possible resources the class/school may possess (Appendix D). Several classroom and school resources were identified such as a classroom Smartboard for teaching lessons, a student computer available for academic use by students, and 25 touch screen laptops which can be used when signed out in advance for educational
assignments. While these resources have been identified they are infrequently used by
the class (besides the Smartboard which is used daily to teach lessons).

1. **Reinforcement Checklist**
   The *Children’s Reinforcement Survey* (Cautella & Brion-Meisels, 1979; Appendix E)
was used to identify possible reinforcers for treatment. Erik completed the Children’s
Reinforcement Survey on September 18th to help identify possible reinforcers to be used
during treatment. Erik identified different kinds of praise, stickers, and special jobs as his
most favoured reinforcers. Other reinforcers Erik preferred were free-time, out-side play,
hugs, and public recognition, none of which were used due to class disruption.

2. **Thinking Skills Inventory (CPS Assessment)**
The Thinking Skills Inventory (TSI) was used to identify triggers and lagging skills in
accordance to the Collaborative Problem Solving Model of Intervention (CPS; Appendix
transitions, moving from one task to another, especially moving from a preferred activity
like recess back to academic work. He frequently misinterprets what is being said to him
and sees things primarily only in black and white. Erik has a very difficult time with
independent academic work that he finds challenging. Recess is a very big problem for
Erik as he is very quick to react with intense aggression to his peers when a game goes
wrong or an incident arises. Finally, it has been identified that Erik’s jealously for
teacher attention causes peer rejection and sometimes aggression when another student is
getting staff attention and he is not.

**Functional Assessment.** Functional assessment procedures have been used to
determine the function of the participant’s off-task behaviour. An ABC Naturalistic
Observation sheet was completed during baseline (Appendix C) as well as three
functional assessment checklist for teachers and staff FACTS sheets (Appendix F)
distributed to all three helping professionals which indicated that staff attention is the
primary function of the participant’s off-task behaviour.

**Data Collection and Measures**

**1 Functional assessment checklist for teachers and staff.** The Primary Child and
Youth worker in the class as well as the EA were interviewed on September 18th,
2012 using the *Functional Assessment Checklist for Teachers and Staff* (FACTS;
March R.E., Horner, R.H., Lewis-Palmer, T., Brown, D., Crone, D., Todd, A.W., et
al. et al. 2000; Appendix B). The most frequently reported behaviours were identified
as aggression, work completion, and on-task behaviour. These behaviours occurred
most frequently during independent academic work periods; typically this occurs
from 9:00am to 10:15am, Monday to Friday.
Naturalistic observation (ABC) of Erik at school. Erik’s behaviour was recorded using an ABC chart throughout the school day (Appendix C). The data showed that his behaviour occurred most often during independent worktime (Figure 1). Erik engaged in behaviours; refusing to initiate schoolwork without one-to-one staff support, refusing to do the assigned task, talking out, pushing assigned work to the floor, scribbling on the worksheet, crossing arms on to desk and resting head on arms and sulking, and disrupting peers at work. Consequences to Erik’s off-task behaviour were most often shown by staff attention as seen in Figure 2. This data supports that staff attention is the primary function of his behaviour.

Figure 1: Four primary antecedents to Erik’s off-task behaviour were identified from the functional assessments and natural observation (APPENDIX C): 1. Lunch time 2. Recess 3. Independent worktime 4. Other. Independent work had the highest percentage out of all identified antecedents and was therefore chosen for intervention. good
Figure 2: Three major consequences were identified during natural observation (APPENDIX C) and functional analysis: 1. Positive reinforcement (attention from staff) 2. Escape from demand/task 3. Other. Positive reinforcement being the most commonly demonstrated natural consequence 80% was used for intervention.

Baseline Assessment

1. **Momentary time sampling.** Erik’s on-task behaviour was observed using momentary time-sampling (Appendix F). His behaviour was recorded from 9:00am to 10:15 am (75 minutes) for 5 consecutive schools days (Figure/Appendix F). Each interval was 5 minutes in length, and he was observed every 5 minutes to see if he was on-task. The 75 minute Language Block was divided into 15, 5 minute intervals where “X” signified not on-task and “O” signified he was on task. Over the five days of recording 75 intervals were recorded in total, he was on-task for 34 of the 75 total intervals, therefore, Erik was on-task 45.33% of the time during baseline.
**Figure 3:** On-task behaviour remained reliable and steady throughout baseline data recording. Erik’s stayed on-task on average of 45% during the five days of recording.

**Consent procedures.** A consent form was distributed to the teacher and guardian prior to implementing intervention (Appendix A). The process and the consent form were also explained to Erik. All parties signed the consent form, and were informed that they would be consulted prior to any modifications to the original treatment procedures and could withdraw consent at any time without penalty.

**Procedures**

**Environmental Supports**

Accommodations such as easier work, individual support, constant attention, prompting, and checking that he can do the work level was provided to ensure the child is capable of the work and academic expectations. Prior to assignments the level of difficulty was tested by providing prompting and constant attention while the student was completing the work to ensure that he was capable of completing the work in the presence of constant attention. If the student was capable of completing the work in this ideal situation, difficulty of the work will be ruled out as a factor. This will further support that the results of the functional assessment indicating attention was the main function of the inappropriate behaviour.
Positive Reinforcement

Erik’s positive reinforcement intervention was implemented during a 19-day period. Erik was reinforced with positive reinforcement in the form of verbal praise every 5-minutes noncontingent on behaviour. The verbal praise generally used during intervention was phrases such as: 1. “Wait to go!” 2. “Good job!” 3. “You’re doing so well!” 4. “I’m so proud of the work you’ve done today!” Staff will sit beside Erik during all academics ready to respond to any questions and help guild through tasks. Staff sitting with Erik during the allotted 75-minute block would use positive praise every five minutes or according to the changing intervention criteria.

A fixed time schedule (FT) of reinforcement (Vollmer, Progar, Lalli, Camp, Sierp, Wright, & Eisenschink, 1993) was used to increase his on-task behaviour. An FT five minute schedule of reinforcement was used when providing noncontingent reinforcement to Erik during the allotted 75 minute Language Block Monday-Friday. Five minute intervals were chosen to begin treatment because it was observed that Erik could only stay focused on an academic task for a maximum of 5 minutes.

Changing criterion was used throughout treatment until Erik reached the target of being on-task for 66% of the independent work-time. Erik’s first treatment phase began with a FT 5-minute schedule of positive reinforcement through positive praise until the first criteria of on-task behaviour of 40% was met and stayed consistent for three consecutive days in which the criteria would then be increased. Once the goal of a treatment phase was met it was then increased by 5% for each remaining phase of treatment until the objective was met. Schedule of reinforcement changed along with each criterion level beginning with a FT schedule of noncontingent reinforcement and transitioning to a variable ratio (VR) schedule of reinforcement to promote generalization during the last three criterion levels of treatment.

Objectives.

1. 40% of the work period/FT5 consistent for three days
2. 45% of the work period/FT6 consistent for three days
3. 50% of the work period/FT8 consistent for three days
4. 55% of the work period/VR1 consistent for three days
5. 60% of the work period/VR2 consistent for three days
6. 66% of the work period/VR3 consistent for three days
Prompts

When off-task behaviour was demonstrated, Erik was prompted to get back to work by either a gestural or verbal prompt. Gestural prompts from a staff to return back to work would look like: a tap on his desk to re-focus his attention back to his academic task. A verbal prompt from staff would generally sound like: "Erik, do you need help with this question" or "please get back to work".

Collaborative Problem Solving Approach

The Collaborative Problem Solving (CPS) approach was used every day of the week, from the beginning to the end of the day. Erik was given one-to-one CPS sessions with the Primary Child and Youth Worker (PCYW) or student researcher daily. During a CPS session the PCYW/student researcher discussed Erik’s triggers and identified lagging skills and together they created plans on how he would react in the future if the same event were to happen again. What strategies would he use to avoid an altercation or outburst, examples of Erik’s strategies included: 1. finding a teacher 2. taking space 3. walking away from the situation. After an incident (physical altercation with staff or peers, defiant behaviour, tantruming, etc.) emergency CPS is used immediately to defuse and control the environment, which usually entails Erik and the PCYW/student researcher going into the office and discussing the incident, how he reacted to the incident, and making commitments to how he will act differently in the future.

Chapter IV. Results

Erik’s positive reinforcement intervention was implemented during a 19-day period. The intervention was effective in increasing Erik-s on-task behaviour during independent work-time. As shown in Appendix I, on-task behaviour during baseline remained low and stable over the five day of baseline data recording. During baseline, Erik was on-task 43% of the time-period. As shown in Appendix I Erik’s on-task behaviour steadily increases during intervention. Erik’s on-task behaviour increased to an average of 58% during intervention which represents a 35% increase over baseline in on-task behaviour (Appendix I). Erik has achieved and surpassed all set criteria as mentioned in the Goals and Objectives of intervention, and positive reinforcement will continue to be used by agency staff throughout Erik’s stay in the program.
Figure 4: On-task behaviour during baseline remained low and stable over the five day of baseline data recording. During baseline, Erik was on-task 43% of the time-period. Erik’s on-task behaviour steadily increases during the 19-days of intervention. Erik’s on-task behaviour increased to an average of 58% during intervention which represents a 35% increase in on-task behaviour.

Chapter V. Discussion

Summary

Erik met all the goals and objectives of the program. Positive reinforcement in the form of praise was very effective in increasing Erik’s on-task behaviour. Erik mentioned that praise makes him feel important and special.

The frequency of praise delivery was not faded to a completely natural settings, however instructions for further fading procedures were included in the mediator instructions to promote natural fading earlier in intervention to avoid program dependence. Follow-up to ensure the effectiveness of the program in the form of visiting the classroom will be conducted one month from December 14th, 2012.

Baseline assessment was taken while the CPS model was already being implemented by the agency. Because of this, the baseline phase could be interpreted as a control group using only CPS without reinforcement contingencies. It cannot be assumed
that if baseline assessments were conducted for several weeks opposed to the five days recorded in this study, that on-task behaviour would not have increased while only using the CPS model, however, with the implementation of positive reinforcement combined with the CPS model on-task behaviour increased in a significant, consistent matter. Future studies should assess the use of positive reinforcement and CPS on their own and in combination to test reliability and causality during treatment.

Changing criterion design was particularly suited to this study since the behaviour of being on-task was already in Erik’s repertoire but needed to be increased to be more successful in his academics. Strength to using the changing criterion design was that it did not require a return-to-baseline phase with a withdrawal of reinforcement.

The current study gives evidence that positive reinforcement used in combination with the CPS model can be an effective method of intervention for children with behavioural problems.

**Limitations and challenges.** Limitations of the study include the fact that it is a single case study. Thus results of this study will only give support to the effectiveness of this treatment for this participant. The intervention is conducted from 9:00am – 10:15am which means that other classes throughout the day may not be affected by the positive reinforcement combined with collaborative problem solving treatment. Additionally, it has been recognized that using an AB (baseline and intervention) design there is no return to baseline stage to test reliability. However, as stated above the changing criterion design gives support to the reliability of the results. Analysis of on-task behaviour during other periods of the day and comparing these rates with the rates of the treatment period may give support to the use of the combination of the two treatments rather than just CPSs which is used throughout on its own. Proximity to the child may be confound, because the nature of the class is focused on one-to-one support and attention Erik was proximal to the researcher or another supporting staff member at all times which could have acted as reinforcement.

**Multilevel Challenges to Services Implementation**

**Client**

Because the program/agency works with at-risk children you can never be sure what condition the participant will be coming in to treatment in.

For instance:

- did he eat breakfast
- is there a lunch packed for him that day
- did someone help him get ready in the morning
- did an adult make sure he took his medication
- was there an incident the night before or morning that could make him tired or cranky
The participant takes Risperidone and Biphenton medication in the mornings, if he forgets to take his medication in the morning he is very hyperactive and aggressive to the other children.

Students in the program all have different diagnoses and find it very hard to stay engaged in school activities for an entire school day. Frequently the students can work only until lunch time, after lunch their attention is very hard to maintain.

**Program**

Because of the nature of the agency’s day treatment classroom, there are constant disruptions that impact the classroom environment. Frequently there are incidents and conflict between students, which need immediate staff assistance. It is also very normal to have a student in the back of the class screaming, cursing, and acting aggressively towards staff and student peers as they are being restrained, causing breaks in study and recording periods.

The students in the program are all there to work on different things but aggression is the norm and because of this staff and other children are frequently getting injured by student’s outbursts.

**Organization**

There is limited space in each program ran by the agency which means that not every child that needs the help of the program will get immediate support.

Children working with this agency have a one-year contract into a program. The problem with this is that many of the children are not ready to leave after only one year.

**Societal**

The goal of the program is to reintegrate the children back into community schools. The problem this faces at a societal level is that there is a strong stigma about the children coming from programs that they are “bad” or “unlikeable” etc.

**Contribution to the Field of Psychology**

The CPS model is a very new form of intervention and because of this little data is available on the mechanisms of change in treatment, as well as limited studies combining the model with other interventions such as those using applied behaviour analysis principles. This case study provides evidence of CPS and positive reinforcement to be an efficacious treatment option with children diagnosed with ODD and ADHD.

**Recommendations to Future Research**

Erik met all the goals and objectives of the program. The study supports the hypothesis that positive reinforcement in the form of praise and CPS was effective in
increasing Erik’s on-task behaviour. Erik reported that "praise makes him feel important and special" to his teacher.

The frequency of praise delivery was not faded to a completely natural level, however instructions for further fading procedures were included in the mediator instructions to promote natural fading earlier in intervention to avoid program dependence. Follow-up to ensure the effectiveness of the program in the form of visiting the classroom will be conducted one month from December 14th, 2012.

The objectives of the intervention were met earlier than the planned time period. Future studies may increase the objectives. The initial plan during intervention was to limit and decrease the amount of one-to-one support given to Erik from a staff member during independent work time. However, without constant one-to-one support Erik would frequently end the academic task by refusing to engage, crossing his arms, and resting his head on his arms until staff sat beside him to support him while he tried the work. In the future, fading out the constant one-to-one support should be initiated much earlier in intervention. This is important in order to help Erik successfully transition back to a regular classroom setting.

Maintenance and Generalization

Because the intervention was only being implemented during Language Arts, in order to promote generalization, the intervention would need to be used in all of Erik’s classes during a typical school day. This would be easy to achieve because of the manageable ratio between staff to student (4 staff, 7 students). The verbal and gestural prompts given to Erik when he is off-task continued to be used, as they are natural prompts that would be used by educators in natural settings. Erik also continued to receive positive reinforcement in the form of praise but this was faded out from the initial FT5 schedule to a more natural schedule using a variable time (VT) schedule of reinforcement.
References


Appendix A: Consent form

Project title: Implementing Positive Reinforcement in combination with CPS in the Treatment of Off-Task Behaviour in an 8-Year-Old Boy Diagnosed with ADHD and ODD during Independent Worktime

Principal Investigator: Jessica Sargent
Name of supervisor: Pamela Shea
Name of Institution: St. Lawrence College
Name of part partnering institution/agency: Crossroads Children’s Centre

Invitation
Your grandchild is being invited to take part in a research study. I am a student in my 4th year of the Behavioural Psychology program at St. Lawrence College. I am currently on placement at the Crossroads Children’s Centre. As a part of this placement, I am completing a research project (called an applied thesis). I would like to ask you for your help to complete this project. The information in this form will help you understand my project. Please read the information carefully and ask any questions you might have before you decide if you want to take part.

Why is this study being done?
This study is accessing the use of positive reinforcement in combination with CPS to help children with behavioural difficulties learn the skills they need to become successful in school. Positive Reinforcement is used naturally throughout the school day in different forms such as: praise, public recognition, free time, stickers etc. For the purpose of this study, positive reinforcement will be the focus to help increase your grandchild’s on-task behaviour in the classroom.

What will my grandchild need to do if he takes part?
If you choose to let your grandchild take part in this study, he will participate in an assessment where the teacher will be able to narrow his troublesome areas throughout the day (ie. Transitional periods, language, math, gym etc.), interviews will take place with the child and agency staff to identify possible reinforcers to best individualize the program for your grandchild. The program will be conducted from 9:00am to 10:15am during his Language Block, Monday to Friday for about 7 weeks. The program will be run by Jess Sargent and supported by the agency staff in the classroom.

What are the potential benefits of my grandchild taking part?
Some benefits of your grandchild taking part in this research study includes introducing him to new learning opportunities and developing a strategy to help him better control behaviours. Positive Reinforcement strategies have been effective in
helping many diverse populations and have been shown to be confidence boosting, and an overall great experience for the kids.

What are the potential benefits of this research study to others?
Information from this project may also be used to help increase the use of Positive Reinforcement in combination with CPS for others in day treatment centres in the future.

What are the potential disadvantages or risks of taking part?
Risks from taking part in this research study are minimal but may include your grandson getting bored or becoming frustrated by the constant attention from the researcher. As well, there is no guarantee that this program will work for your grandson.

Will my grandchild’s information you collect from him in this project be kept private?
I will make every attempt to keep any information that identifies your grandchild strictly confidential unless required by law. The consent form will be kept in a locked filing cabinet at St Lawrence College as well as a copy kept at Crossroads for at least 6 years. All questionnaires and interviews will be kept in a locked filing cabinet at the agency and destroyed after the program report is written. Any information on the computer will be password protected. He will not be identified by name in any reports, publications, or presentations resulting from this program.

Does my grandchild have to take part?
Taking part is voluntary. It is up to you to decide whether or not your grandchild will take part in this research project. Your grandchild will continue to attend the cross roads classroom regardless of your decision to participate in this study. If you do decide your grandchild can take part, you will be asked to sign this consent form. If you do decide to take part in this research project, you are still free to withdraw your grandchild at any time, without giving any reason, and without incurring any penalty, or negative effects.

Contact for further information
This project has been approved by the Research Ethics Board at St. Lawrence College. The project will be developed under the supervision of Kennedy Williams, (child and youth worker) my Agency Supervisor and Pamela Shea, (MADS, BCBA), my College Supervisor, from St. Lawrence College. I really appreciate your cooperation and if you have any additional questions or concerns, feel free to ask me, Jessica Sargent(jsargent27@sl.on.ca). You can also contact my College Supervisor (pshea@OCTC.ca) or you may also contact the Research Ethics Board at reb@sl.on.ca.

Consent
If you agree to take part in this research project, please complete the following form and return it to me as soon as possible. A copy of this signed document will be given to you for your own records. An additional copy of your consent will be retained at the agency [and in a secure location at St. Lawrence College, if applicable].

By signing this form, I agree that:

✓ The study has been explained to me.
✓ All my questions were answered.
✓ Possible harm and discomforts and possible benefits (if any) of this study have been explained to me.
✓ I understand that I have the right not to let my grandchild participate and the right to stop at any time.
✓ I am free now, and in the future, to ask any questions I have about the study.
✓ I have been told that my grandchild’s personal information will be kept confidential.
✓ I understand that no information that would identify my grandchild will be released or printed without asking me first.
✓ I understand that I will receive a signed copy of this consent form.

I hereby consent that my grandchild will take part.

Guardian Name ____________________________ Signature of Guardian __________ Date __________

Student Printed Name ____________________________ Signature of Student __________ Date __________
APPENDIX B: FACTS sheets

Functional Assessment Checklist for Teachers and Staff (FACTS-Part A)

Step 1
Student/ Grade: Erik Wallace/Grade 4       Date: September 18\textsuperscript{th}, 2012
Interviewer: Jessica Sargent       Respondent(s): EA

Step 2

\textbf{Student Profile:} Please identify at least three strengths or contributions the student brings to school.

Erik is very funny and can be very sweet.

Step 3

\textbf{Problem Behavior(s): Identify problem behaviors}

\begin{tabular}{|l|l|l|l|}
\hline
___ Tardy & X Fight/physical & X Disruptive & ___ Theft \\ 
Aggression & & & \\ 
___ & X Inappropriate & ___ & ___ Vandalism \\ 
Unresponsive & Language & Insubordination & \\ 
___ & ___ Verbal Harassment & X Work not & ___ Other \\ 
Withdrawn & & done & \\ 
___ & X Verbally & ___ Self-injury & \\ 
Inappropriate & & & \\ 
\hline
\end{tabular}

Step 4
Describe problem behavior: 

Identifying Routines: Where, When and With Whom Problem Behaviors are Most Likely.
<table>
<thead>
<tr>
<th>Schedule (Times)</th>
<th>Activity</th>
<th>Likelihood of Problem Behavior</th>
<th>Specific Problem Behavior</th>
</tr>
</thead>
<tbody>
<tr>
<td>9:00am</td>
<td>Language Block</td>
<td>Low High</td>
<td>Work refusal/demanding 1:1 support</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10:15am</td>
<td>Nutrition Break</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10:45am</td>
<td>Recess</td>
<td></td>
<td>Issues with peers/needs constant supervision</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>11:00am</td>
<td>Math Block</td>
<td></td>
<td>Work refusal/demanding 1:1 support</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>12:15am</td>
<td>Lunch</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>12:45pm</td>
<td>Recess</td>
<td></td>
<td>Issues with peers/needs constant supervision/poor social skills</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1:00pm</td>
<td>Art Block</td>
<td></td>
<td>Work refusal</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2:15pm</td>
<td>Home</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Select 1-3 Routines for further assessment: Select routines based on (a) similarity of activities (conditions) with ratings of 4, 5 or 6 and (b) similarity of problem behavior(s). Complete the FACTS-Part B for each routine identified.

4/24/00
**Functional Assessment Checklist for Teachers & Staff (FACTS-Part B)**

**Step 1**

Student/ Grade: Erik Wallace  
Date: September 18th, 2012  
Interviewer: Jessica Sargent  
Respondent(s): EA

**Step 2**

**Routine/Activities/Context:** Which routine (only one) from the FACTS-Part A is assessed?

<table>
<thead>
<tr>
<th>Routine/Activities/Context</th>
<th>Problem Behavior(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Language block 9:00am-10:15am</td>
<td>Work refusal, demanding 1:1 support, refusing to initiate task without 1:1 support</td>
</tr>
</tbody>
</table>

**Step 3**

Provide more detail about the problem behavior(s):

What does the problem behavior(s) look like? **Refusing to complete work, throwing school work onto the floor, scribbling on the assignment, asking staff to help him complete a task because he says he cannot complete it alone.**

How often does the problem behavior(s) occur? **Typically everyday**

How long does the problem behavior(s) last when it does occur? **About a half or ¾ of the block**

**Step 4**

What is the intensity/level of danger of the problem behavior(s)? **No level of danger to peers or staff. Intensity varies**
What are the events that predict when the problem behavior(s) will occur? (Predictors)

<table>
<thead>
<tr>
<th>Related Issues (setting events)</th>
<th>Environmental Features</th>
</tr>
</thead>
<tbody>
<tr>
<td>___ illness to take</td>
<td>___ reprimand/correction X structured activity</td>
</tr>
<tr>
<td>___ drug use medication</td>
<td>___ physical demands ___ unstructured time</td>
</tr>
<tr>
<td>___ negative social conflict at home</td>
<td>___ socially isolated X tasks too boring</td>
</tr>
<tr>
<td>___ academic failure</td>
<td>___ with peers X activity too long</td>
</tr>
<tr>
<td>X</td>
<td>___ Other X tasks too difficult</td>
</tr>
</tbody>
</table>

What consequences appear most likely to maintain the problem behavior(s)?

<table>
<thead>
<tr>
<th>Things that are Obtained</th>
<th>Things Avoided or Escaped From</th>
</tr>
</thead>
<tbody>
<tr>
<td>X adult attention</td>
<td>Other: ___ hard tasks</td>
</tr>
<tr>
<td>from 1:1 support staff</td>
<td>_________________________</td>
</tr>
<tr>
<td>___ peer attention</td>
<td>___ reprimands</td>
</tr>
<tr>
<td>staff</td>
<td>_________________________</td>
</tr>
<tr>
<td>___ preferred activity</td>
<td>___ peer negatives</td>
</tr>
<tr>
<td>_________________________</td>
<td>_________________________</td>
</tr>
<tr>
<td>___ money/things</td>
<td>___ physical effort</td>
</tr>
<tr>
<td>_________________________</td>
<td>_________________________</td>
</tr>
<tr>
<td>___ adult attention</td>
<td>___ adult attention</td>
</tr>
</tbody>
</table>
SUMMARY OF BEHAVIOR
Identify the summary that will be used to build a plan of behavior support.

<table>
<thead>
<tr>
<th>Setting Events &amp; Predictors</th>
<th>Problem Behavior(s)</th>
<th>Maintaining Consequence(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Conflict at home</td>
<td>Work refusal, talking out, throwing assigned task onto the floor, scribbling on the task</td>
<td>Prompts from staff to get to work</td>
</tr>
<tr>
<td>Academic difficulty</td>
<td></td>
<td>1:1 support with staff to work on the assignment together</td>
</tr>
<tr>
<td>If Erik doesn’t take morning medication</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

How confident are you that the Summary of Behavior is accurate?

Not very confident
Confident
Very

1 2 3 4 5 6

What current efforts have been used to control the problem behavior?

<table>
<thead>
<tr>
<th>Strategies for preventing problem behavior</th>
<th>Strategies for responding to problem behavior</th>
</tr>
</thead>
<tbody>
<tr>
<td>____ schedule change</td>
<td>X reprimand</td>
</tr>
<tr>
<td>____________________</td>
<td>Other:</td>
</tr>
<tr>
<td>____ seating change</td>
<td>____ office</td>
</tr>
<tr>
<td>____________________</td>
<td>referral</td>
</tr>
<tr>
<td>X curriculum change</td>
<td>____</td>
</tr>
<tr>
<td>____________________</td>
<td>detention</td>
</tr>
</tbody>
</table>
APPENDIX C: FACTS sheets

Functional Assessment Checklist for Teachers and Staff (FACTS-Part A)

Step 1
Student/ Grade: Erik Wallace Date: Tuesday September 18th 2012
Interviewer: Jessica Sargent Respondent(s): CYW

Step 2

Student Profile: Please identify at least three strengths or contributions the student brings to school.

Step 3

Problem Behavior(s): Identify problem behaviors

| ___ Tardy | X Fight/physical Aggression | X Disruptive | ___ Theft |
| ___ Unresponsive | X Inappropriate Language | X Insubordination | ___ Vandalism |
| ___ Withdrawn | ___ Verbal Harassment | X Work not done | ___ Other |
| X Verbally Inappropriate | ___ Self-injury |

Describe problem behavior: ____________________________________________

Step 4

Identifying Routines: Where, When and With Whom Problem Behaviors are Most Likely.
<table>
<thead>
<tr>
<th>Schedule (Times)</th>
<th>Activity</th>
<th>Likelihood of Problem Behavior</th>
<th>Specific Problem Behavior</th>
</tr>
</thead>
<tbody>
<tr>
<td>9:00am</td>
<td>Language</td>
<td>Low</td>
<td>Shuts down/give ups on task</td>
</tr>
<tr>
<td></td>
<td></td>
<td>High</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>1 2 3 4 5</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>6</td>
<td></td>
</tr>
<tr>
<td>10:15am</td>
<td>Nutrition Break</td>
<td></td>
<td>Arguments with peers</td>
</tr>
<tr>
<td></td>
<td></td>
<td>1 2 3 4 5</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>6</td>
<td></td>
</tr>
<tr>
<td>10:45am</td>
<td>Recess</td>
<td></td>
<td>Physical aggression</td>
</tr>
<tr>
<td></td>
<td></td>
<td>1 2 3 4 5</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>6</td>
<td></td>
</tr>
<tr>
<td>11:00am</td>
<td>Math</td>
<td></td>
<td>Shuts down/challenging work</td>
</tr>
<tr>
<td></td>
<td></td>
<td>1 2 3 4 5</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>6</td>
<td></td>
</tr>
<tr>
<td>12:15am</td>
<td>Nutrition Break</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>1 2 3 4 5</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>6</td>
<td></td>
</tr>
<tr>
<td>12:45pm</td>
<td>Recess</td>
<td></td>
<td></td>
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<tr>
<td></td>
<td></td>
<td>1 2 3 4 5</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>6</td>
<td></td>
</tr>
<tr>
<td>1:00pm</td>
<td>Gym</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>1 2 3 4 5</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>6</td>
<td></td>
</tr>
<tr>
<td>2:15pm</td>
<td>Home</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>1 2 3 4 5</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>6</td>
<td></td>
</tr>
</tbody>
</table>
Select 1-3 Routines for further assessment: Select routines based on (a) similarity of activities (conditions) with ratings of 4, 5 or 6 and (b) similarity of problem behavior(s). Complete the FACTS-Part B for each routine identified.

4/24/00
Step 1

Student/ Grade: Erik Wallace/Grade 4
Date: Tuesday September 18th 2012

Interviewer: Jessica Sargent
Respondent(s): CYW

Step 2

Routine/Activities/Context: Which routine (only one) from the FACTS-Part A is assessed?

<table>
<thead>
<tr>
<th>Routine/Activities/Context</th>
<th>Problem Behavior(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Step 3

Provide more detail about the problem behavior(s):

What does the problem behavior(s) look like? Shutting down/verbal/physical aggression

How often does the problem behavior(s) occur? daily

How long does the problem behavior(s) last when it does occur? 2 minutes and up

Step 4

What is the intensity/level of danger of the problem behavior(s)? high when aggressive
What are the events that predict when the problem behavior(s) will occur? (Predictors)

<table>
<thead>
<tr>
<th>Related Issues (setting events)</th>
<th>Environmental Features</th>
</tr>
</thead>
<tbody>
<tr>
<td>___ illness</td>
<td>X reprimand/correction</td>
</tr>
<tr>
<td>Other: ________________________</td>
<td></td>
</tr>
<tr>
<td>___ drug use</td>
<td>___ physical demands</td>
</tr>
<tr>
<td></td>
<td>X socially isolated</td>
</tr>
<tr>
<td>___ negative social conflict</td>
<td>X with peers</td>
</tr>
<tr>
<td>___ conflict at home</td>
<td>___ Other</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>___ academic failure</td>
<td></td>
</tr>
</tbody>
</table>

What consequences appear most likely to maintain the problem behavior(s)?

<table>
<thead>
<tr>
<th>Things that are Obtained</th>
<th>Things Avoided or Escaped From</th>
</tr>
</thead>
<tbody>
<tr>
<td>X adult attention</td>
<td>X hard tasks</td>
</tr>
<tr>
<td>Other:</td>
<td>Other:</td>
</tr>
<tr>
<td>___ peer attention</td>
<td>X reprimands</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>X preferred activity</td>
<td>X peer negatives</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>___ money/things</td>
<td>___ physical effort</td>
</tr>
<tr>
<td></td>
<td>___ adult attention</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>
### SUMMARY OF BEHAVIOR
Identify the summary that will be used to build a plan of behavior support.

<table>
<thead>
<tr>
<th>Setting Events &amp; Predictors</th>
<th>Problem Behavior(s)</th>
<th>Maintaining Consequence(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Assessing academic levels</td>
<td>Shutting down</td>
<td>Adult attention</td>
</tr>
<tr>
<td>CPS discussions</td>
<td>Verbal/physical</td>
<td>Preferred activity</td>
</tr>
<tr>
<td></td>
<td>aggression</td>
<td></td>
</tr>
</tbody>
</table>

How confident are you that the **Summary of Behavior** is accurate?

Not very confident  
Confident  
Very

1 2 3 4 5 6

What current efforts have been used to control the problem behavior?

<table>
<thead>
<tr>
<th>Strategies for preventing problem behavior</th>
<th>Strategies for responding to problem behavior</th>
</tr>
</thead>
<tbody>
<tr>
<td>___ schedule change</td>
<td>___ reprimand</td>
</tr>
<tr>
<td>________________</td>
<td>____________________</td>
</tr>
<tr>
<td>___ seating change</td>
<td>___ office</td>
</tr>
<tr>
<td>________________</td>
<td>____________________</td>
</tr>
<tr>
<td>___ curriculum change</td>
<td>___ referral</td>
</tr>
<tr>
<td>________________</td>
<td>____________________</td>
</tr>
</tbody>
</table>

37
## APPENDIX D: ABC Sheet

### Naturalistic Observation (ABC) Sheet

<table>
<thead>
<tr>
<th>Time</th>
<th>Antecedent</th>
<th>Behaviour</th>
<th>Consequence</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. 9:00am</td>
<td><strong>1.1</strong> Teacher asks student to begin independent work</td>
<td><strong>1.2</strong> Erik speaks out asking for teacher assistance without raising hand</td>
<td><strong>1.3</strong> Teacher takes Erik out of the class to work together on the worksheet together</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. 9:20am</td>
<td><strong>2.1</strong> Teacher directs class to silent read</td>
<td><strong>2.2</strong> Erik got out of his seat, sat in the corner of the classroom and put his arms folded and head down onto his knees</td>
<td><strong>2.3</strong> Child and Youth Worker brings Erik out of the classroom to talk one-to-one together in the office</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. 10:25am</td>
<td><strong>3.1</strong> Teacher instructs students to get their snacks, bring it back to the class, and listen silently to the storybook being read</td>
<td><strong>3.2</strong> Erik makes faces at his peer neighbour</td>
<td><strong>3.3</strong> Behaviour is ignored by peer and staff</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. 11:15am</td>
<td><strong>4.1</strong> Recess time: another student threw sand at Erik on the playground, the sand went in his eyes and hair</td>
<td><strong>4.2</strong> Erik clenched fists, kicked/punched the chain-linked fence, shouted at student who was being reprimanded by staff on other side of playground. Erik refused to go into the school</td>
<td><strong>4.3</strong> Erik was approached by staff and encouraged to go into the school and ignore the student who threw the sand. Staff used positive reinforcement through verbal</td>
</tr>
<tr>
<td>Time</td>
<td>Event Description</td>
<td></td>
<td></td>
</tr>
<tr>
<td>--------------</td>
<td>------------------------------------------------------------------------------------</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
| 5.11:23am    | **5.1** Group CPS session lead by CYW with entire class to discuss the events at recess  
               **5.2** Erik pushed everything that was on his desk onto the floor, raised knees and put head and folded arms onto his knees  
               **5.3** CYW asks Erik what was wrong and why he was upset |
| 6.12:10am    | **6.1** After group work: CYW initiated a CPS discussion about self-evaluation and each student's individual work throughout the day  
               **6.2** Erik evaluated himself as 3/10 because he was “bad” (Erik completed the task with little staff assistance)  
               **6.3** CYW brought the discussion to the whole class asking them what they would have evaluated Erik’s performance during the group work. All students praised Erik for his good work |
| 7.12:30pm    | **7.1** Student spoke out without raising his hand. Teacher prompts him to raise his hand  
               **7.2** Erik rolls around onto his desk, feet on his chair, hand raised in the air  
               **7.3** Ignored by staff and peers |
| 8.1:50pm     | **8.1** Teacher prompts class to begin art assignment  
               **8.2** Erik talks out to teacher without raising his hand saying that he cannot do the assignment, that it is too hard, and that he would like a staff to do it for him. Erik then scribbles on the  
               **8.3** Teacher and staff encourages him to try the task independently |
| assignment |  |  |
## APPENDIX E: Classroom/School Ecology Assessment

### Classroom/School Ecology Assessment

<table>
<thead>
<tr>
<th>Section</th>
<th>Description</th>
</tr>
</thead>
</table>
| 1. Classroom/ School Strengths | - Very experienced teacher, EA, and Child and Youth Worker (CYW): have all worked within the day-treatment programs for over 10 years  
- Very small number of students in the classroom (7) which allows for one-to-one individual attention to each child  
- Multi-disciplinary team knows the school/other teachers/ and the schools resources very well  
- All supporting staff has been trained in the Collaborative Problem Solving Approach (CPS)  
- All supporting staff have strong relationships with the students and their parents/guardians  
- Each day-treatment classroom has a CYW specialized in CPS and behaviour  
- All supporting staff is trained in Nonviolent Crisis Intervention |
| 2. Classroom/School Resources | - Classroom has a Smartboard, used to teach lessons  
- Classroom has a computer which can be used by the students throughout the school day  
- School has touch-screen, individual laptops for 25 students which can be used when signed out in advance for educational assignments |
| 3. Stressors | - All students are very high-needs  
- Students have problems with aggression  
- Most students are diagnosed with ADHD and ODD  
- 2-3 different grad levels are being taught in the one classroom (Grades 4,5,6)  
- Several students have learning disabilities  
- All students are taking medication in the mornings and some taken at the school in the afternoon, behaviour changes when morning medication wears off in the |
early afternoon

<table>
<thead>
<tr>
<th>4. <strong>Classroom Goals</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>- Students to achieve passing grades as expected by the School Board</td>
</tr>
<tr>
<td>- To decrease aggressive/disruptive behaviour in all students</td>
</tr>
<tr>
<td>- Help the students progress through treatment to be able to be integrated back into their community schools</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>5. <strong>Problematic Classes/ Routines</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>- Language, math, and science class has the most demanding academic expectations therefore, many of the students find these classes very challenging</td>
</tr>
<tr>
<td>- Transition periods are very challenging to the students. Moving from one task to another</td>
</tr>
<tr>
<td>- Recess is very difficult for many of the students</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>6. <strong>Prioritize Routines for Intervention</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Language block</td>
</tr>
<tr>
<td>Recess</td>
</tr>
<tr>
<td>Math</td>
</tr>
<tr>
<td>Science</td>
</tr>
<tr>
<td>Art</td>
</tr>
</tbody>
</table>
APPENDIX F: Identification of Reinforcers Checklist

IDENTIFICATION OF REINFORCERS

Name: Erik Wallace     Date: September 19th

INSTRUCTIONS: Use a check mark (X) to indicate the items preferred

SOCIAL AND SENSORY REINFORCERS:
X Adult attention
X Attention from specific adults
   List preferred adults: CYW, Teacher, Researcher
☐ Being left alone
X Time spent with peer:
   List preferred peers: _____________________________________________
☐ Freedom from interference from adults
☐ Freedom from interference from peers
☐ A positive note to give to person of choice
☐ Stim time
X Hugs
X Praise
☐ Eye contact
☐ Signe ‘high five’
X Private praise
X Public recognition
X Public praise
☐ Being rocked
☐ Being held
☐ Applause
☐ OK sign
☐ Back rub
☐ Tickles
☐ Sit in adult’s lap
☐ Thumbs up sign
☐ Shake hands
☐ High five sign
☐ X Pats
☐ Twirl around
☐ Swinging
☐ Being brushed
☐ Jumping
☐ Vibrator
☐ Lotion
☐ Powder
☐ Roll up in blanket
☐ Smiles
☐ Motor lab

☐ Blowing bubbles
☐ Shoes off
☐ Cologne
☐ List other: ___________________________________________
ACTIVITY REINFORCERS

☐ Music
   List preferred music: ____________________________________________

☐ Playing with toys
   List preferred toys: ____________________________________________

☐ Puzzles

☐ Computer

☐ Water play

X Outside play

☐ Snack time

X Free time

☐ Playing with pets

☐ Riding toys

☐ Books, stories

☐ Going for a walk

☐ Making choices

X Helping adult

☐ Drawing

☐ Painting

☐ Being read to

X Job responsibilities

☐ Wearing cosmetics

☐ Visiting

☐ Wearing jewellery
☐ Special seat
☐ Balloons
☐ More independence
☐ Riding bikes
☐ Cooking
   List preferred materials: ______________________________________________________
☐ Computer
   List preferred programs: _____________________________________________________
☐ Social activities
   List preferred types: _________________________________________________________
☐ Leisure activities
   List preferred types: _________________________________________________________
☐ List other:
   ____________________________________________________________

TANGIBLE REINFORCERS

☐ Chips
   List preferred types: _________________________________________________________
☐ Cookies
   List preferred types: _________________________________________________________
☐ Candy
   List preferred types: _________________________________________________________
☐ Fruit
   List preferred types: _________________________________________________________
☐ Cereal
   List preferred types: _________________________________________________________
☐ Snacks
  List preferred snacks: ________________________________________________

☐ Drinks
  List preferred types: ________________________________________________

☐ Other preferred foods: ______________________________________________

☐ Stickers
  List preferred types: ________________________________________________

☐ Toys
  List preferred types: ________________________________________________

☐ Games
  List preferred types: ________________________________________________

☐ List other: _________________________________________________________
APPENDIX/FIGURE G: Momentary Time Sampling Sheet

Momentary Time Sampling Sheet

Participant’s on-task behaviour during baseline

Name: Erik Wallace  
Date: Monday, September 17th, 2012

Observer: Jessica Sargent

Setting: Classroom

Time started: 9:00am

Time ended: 10:15am

Interval length: 75 minutes in 5-minute intervals

<table>
<thead>
<tr>
<th>Behaviour/interval</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>O</td>
<td>X</td>
<td>O</td>
<td>X</td>
<td>O</td>
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<td>6</td>
<td>7</td>
<td>8</td>
<td>9</td>
<td>10</td>
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<td>O</td>
<td>X</td>
<td>X</td>
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<tr>
<td></td>
<td>11</td>
<td>12</td>
<td>13</td>
<td>14</td>
<td>15</td>
</tr>
<tr>
<td></td>
<td>O</td>
<td>O</td>
<td>X</td>
<td>X</td>
<td>O</td>
</tr>
</tbody>
</table>

X = Yes

O = No

1. Target behaviour: On-task
2. Occurrences: 6/15
3. Number of Intervals Recorded: 15
4. Percentage Occurrences: 40%

Name: Erik Wallace  
Date: Tuesday, September 18th, 2012

Observer: Jessica Sargent
Setting: Classroom

Time started: 9:00am

Time ended: 10:15am

Interval length: 75 minutes in 5-minute intervals

<table>
<thead>
<tr>
<th>Behaviour/interval</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>6</td>
<td>7</td>
<td>8</td>
<td>9</td>
<td>10</td>
<td></td>
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<tr>
<td></td>
<td>X</td>
<td>O</td>
<td>O</td>
<td>X</td>
<td>O</td>
</tr>
<tr>
<td>11</td>
<td>12</td>
<td>13</td>
<td>14</td>
<td>15</td>
<td></td>
</tr>
<tr>
<td></td>
<td>X</td>
<td>X</td>
<td>O</td>
<td>O</td>
<td>O</td>
</tr>
</tbody>
</table>

X = Yes

O = No

1. Target behaviour: On-task
2. Occurrences: 6/15
3. Number of Intervals Recorded: 15
4. Percentage Occurrences: 40%

Name: Erik Wallace

Date: Wednesday, September 19th, 2012

Observer: Jessica Sargent

Setting: Classroom

Time started: 9:00am

Time ended: 10:15am

Interval length: 75 minutes in 5-minute intervals
<table>
<thead>
<tr>
<th>Behaviour/interval</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>O</td>
<td>X</td>
<td>O</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td></td>
<td>6</td>
<td>7</td>
<td>8</td>
<td>9</td>
<td>10</td>
</tr>
<tr>
<td></td>
<td>X</td>
<td>X</td>
<td>O</td>
<td>O</td>
<td>O</td>
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<tr>
<td></td>
<td>11</td>
<td>12</td>
<td>13</td>
<td>14</td>
<td>15</td>
</tr>
<tr>
<td></td>
<td>X</td>
<td>X</td>
<td>O</td>
<td>O</td>
<td>O</td>
</tr>
</tbody>
</table>

X = Yes
O = No

1. **Target behaviour:** On-task
2. **Occurrences:** 7
3. **Number of Intervals Recorded:** 15
4. **Percentage Occurrences:** 46%

**Name:** Erik Wallace  
**Date:** Thursday, September 20th, 2012

**Observer:** Jessica Sargent

**Setting:** Classroom

**Time started:** 9:00am

**Time ended:** 10:15am

**Interval length:** 75 minutes in 5-minute intervals
X = Yes  
O = No

1. **Target behaviour:** On-task  
2. **Occurrences:** 7  
3. **Number of Intervals Recorded:** 15  
4. **Percentage Occurrences:** 46%

**Name:** Erik Wallace  
**Date:** Friday, September 21st, 2012  
**Observer:** Jessica Sargent  
**Setting:** Classroom  
**Time started:** 9:00am  
**Time ended:** 10:15am  
**Interval length:** 75 minutes in 5-minute intervals

<table>
<thead>
<tr>
<th>Behaviour/interval</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>O</td>
<td>X</td>
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<tr>
<td></td>
<td>6</td>
<td>7</td>
<td>8</td>
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<td>11</td>
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<td>13</td>
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<td>15</td>
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<tr>
<td></td>
<td>O</td>
<td>X</td>
<td>X</td>
<td>O</td>
<td>O</td>
</tr>
</tbody>
</table>

X = Yes

O = No

1. **Target behaviour:** On-task
2. **Occurrences:** 8
3. **Number of Intervals Recorded:** 15
4. **Percentage Occurrences:** 53%
Solving problems and responding to life’s demands requires thinking skills. If a child doesn’t have the skills to handle a problem or expectation adaptively, the result will likely be some form of maladaptive or challenging behavior. The particular form of maladaptive behavior (aggression, screaming, whining, defiance, shutting down, crying, etc) is not important. What is important is identifying the chronic problems adults have with the child or the demands that trigger the child (we call these triggers) and the skills the child lacks that s/he would need to handle those problems/triggers more adaptively (we call these skill deficits).

**Situational Analysis: Identifying Triggers/Problems**

**Instructions:** Before assessing crucial thinking skills, specify the situations in which the child’s maladaptive behavior occurs. Think of when, where, with whom, and over what issues the difficulties arise. What triggers the child? What are the setting events, antecedents or
precipitants? What are the chronic problems causing frustration for the child or the adults around the child? List the specific situations and problems below. (Examples include: getting up in the morning, food, choice and timing, clothing choice, brushing teeth, curfew, bedtime, screen time, homework, getting down to work in class, staying in one’s seat, talking out in class, competitive games at recess, group attendance, taking medicine, recreation time etc.) *Be as specific as possible!*

**Triggers/Problems**

1. Handling transitions-moving from one task to another, moving from an preferred activity back to academics

2. Misinterprets what is being said to him. Sees only in black and white

3. Independent work that he finds too challenging

4. Recess-acts too aggressively with peers. Reacts to others with verbal and physical aggression

5. Very competitive and jealous of other students getting attention or obtaining something that he does not have

You might find that you need more information about certain triggers. List what information is needed and how will you gather it below:

- Speak to grandmothers or others that are close to him
- Read his case file, IEP, and psychological assessments
- Read doctors notes
- Understand the medication he is taking
Now try to prioritize which triggers/problems you’d like to address first using the following questions as your guide:

- Which are causing the most frequent challenging behavior?
- Which are causing the most severe behavior?
- Which are most conducive to resolution?

1. Independent work

2. Recess

3. Eating his lunch

**Assessing Thinking Skills**

**Instructions**: Now that you have identified the specific situations in which the child tends to have the most difficulty, it is time to identify why. Below is a list of thinking skills required to problem solve, be flexible and tolerate frustration. Many children with social, emotional and behavioral challenges will have deficits in these areas. The skills are organized according to five categories or “Pathways”. Use this list as your discussion guide to arrive at a consensus about which skill deficits are contributing to the child’s challenging behavior and conversely which skills represent areas of strength for the child that you may be able to rely on when problem solving with the child. Your goal is to identify specific skill deficits and strengths within these categories and to provide specific examples.

<table>
<thead>
<tr>
<th>PATHWAY</th>
<th>Consistently</th>
<th>Sometimes</th>
<th>Consistently</th>
<th>Consistently</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Executive Functioning Skills</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Handling transitions, shifting from one mindset or task to another (shifting cognitive set)</td>
<td></td>
<td></td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Example: Sticking with tasks requiring sustained attention (perseverance)</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Example: Doing things in a logical sequence or prescribed order (organization)</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Example: Sense of time (planning)</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Example: Reflecting on multiple thoughts or ideas simultaneously (working memory)</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Example: Maintaining focus for goal-directed activities (sustained attention/concentration)</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Example: Ignoring non-relevant stimuli (distractibility)</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Example: Thinking before responding, considering the likely outcomes or consequences of actions, forecasting (reflective not impulsive thinking)</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Considering a range of solutions to a problem

*Example:*

<table>
<thead>
<tr>
<th>Language Processing Skills</th>
<th>Consistently</th>
<th>Sometimes</th>
<th>Sometime s</th>
<th>Consistently</th>
</tr>
</thead>
<tbody>
<tr>
<td>Expressing concerns, needs, or thoughts in words</td>
<td>x</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
| *Example:*
| Identifying or articulating what’s bothering you | | x | | |
| *Example:*
| Understanding what is being said | | x | | |
| *Example:*

<table>
<thead>
<tr>
<th>Emotion Regulation Skills</th>
<th>Consistently</th>
<th>Sometimes</th>
<th>Sometime s</th>
<th>Consistently</th>
</tr>
</thead>
<tbody>
<tr>
<td>Managing emotional response to frustration so as to think rationally (separation of affect)</td>
<td></td>
<td></td>
<td>x</td>
<td></td>
</tr>
</tbody>
</table>
| *Example:*
| Managing irritability and/or anxiety on a chronic basis (outside the context of frustration) | | | x | |
### Cognitive Flexibility Skills

<table>
<thead>
<tr>
<th>Skill</th>
<th>Consistency</th>
<th>Sometime</th>
<th>Sometime Difficult</th>
<th>Consistently Difficult</th>
</tr>
</thead>
<tbody>
<tr>
<td>Seeing the “grays”, being comfortable with “iffy” thinking (vs. more concrete, literal, black-and-white thinking and need for precision)</td>
<td></td>
<td></td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>Example:</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Thinking hypothetically or inferentially/using hypothesis-testing</td>
<td></td>
<td></td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>Example:</td>
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<tr>
<td>Handling deviations from rules, routine, original plan</td>
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<tr>
<td>Example:</td>
<td></td>
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<tr>
<td>Handling unpredictability, ambiguity, uncertainty, novelty</td>
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<tr>
<td>Example:</td>
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<tr>
<td>Shifting from original idea or solution/adapting to changes in plan or new rules</td>
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<tr>
<td>Example:</td>
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<tr>
<td>Taking into account situational factors that would suggest the need to adjust a plan of action</td>
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<tr>
<td>Example:</td>
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</tbody>
</table>
Interpreting information accurately/avoiding cognitive distortions or biases in thinking such as over-generalizing or personalizing (“Everyone’s out to get me,” “Nobody likes me,” “You always blame me,” “It’s not fair,” “I’m stupid,” “Things will never work out for me”)

*Example:*

<table>
<thead>
<tr>
<th>Social Skills</th>
<th>Consistent</th>
<th>Strength</th>
<th>Sometime</th>
<th>Sometimes</th>
<th>Difficult</th>
<th>Consistently</th>
</tr>
</thead>
<tbody>
<tr>
<td>Attending to and/or accurately interpreting social cues and nuances</td>
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<td><em>Example:</em></td>
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<tr>
<td>Starting conversations, entering groups, being reciprocal</td>
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<tr>
<td>Seeking attention in appropriate ways</td>
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<tr>
<td>Appreciating how one’s behavior affects other people (vs. often surprised by others’ responses)</td>
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<td><em>Example:</em></td>
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<tr>
<td>Empathizing with others, appreciating another person’s perspective or point of view</td>
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<td><em>Example:</em></td>
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<tr>
<td>Appreciating how one is coming across or being perceived by others</td>
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</table>

*Example:*

Finally, list the thinking skills for which you need more information (specify what information and how will you gather it):
Momentary Time Sampling of Intervention

Momentary Time Sampling Sheet

Participant’s on-task behaviour during baseline

Name: Erik Wallace  Date: Monday, September 17th, 2012
Observer: Jessica Sargent
Setting: Classroom
Time started: 9:00am
Time ended: 10:15am
Interval length: 75 minutes in 5-minute intervals

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</tbody>
</table>

X = Yes
O = No

5. Target behaviour: On-task
6. Occurrences: 6
7. Number of Intervals Recorded: 15
8. Percentage Occurrences: 40%

Name: Erik Wallace  Date: Tuesday, September 18th, 2012
**Observer:** Jessica Sargent

**Setting:** Classroom

**Time started:** 9:00am

**Time ended:** 10:15am

**Interval length:** 75 minutes in 5-minute intervals

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</table>

**X = Yes**

**O = No**

5. **Target behaviour:** On-task
6. **Occurrences:** 7
7. **Number of Intervals Recorded:** 15
8. **Percentage Occurrences:** 47%

---

**Name:** Erik Wallace

**Date:** Wednesday, September 19th, 2012

**Observer:** Jessica Sargent

**Setting:** Classroom

**Time started:** 9:00am

**Time ended:** 10:15am

**Interval length:** 75 minutes in 5-minute intervals
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</table>

X = Yes  
O = No

1. **Target behaviour:** On-task  
2. **Occurrences:** 7  
3. **Number of Intervals Recorded:** 15  
4. **Percentage Occurrences:** 47%

**Name:** Erik Wallace  
**Date:** Thursday, September 20th, 2012  
**Observer:** Jessica Sargent  
**Setting:** Classroom  
**Time started:** 9:00am  
**Time ended:** 10:15am  
**Interval length:** 75 minutes in 5-minute intervals
5. Target behaviour: On-task
6. Occurrences: 7
7. Number of Intervals Recorded: 15
8. Percentage Occurrences: 47%

Name: Erik Wallace  Date: Friday, September 21st, 2012
Observer: Jessica Sargent
Setting: Classroom
Time started: 9:00am
Time ended: 10:15am
Interval length: 75 minutes in 5-minute intervals

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</table>

X = Yes
O = No

5. Target behaviour: On-task
6. Occurrences: 8
7. Number of Intervals Recorded: 15
8. Percentage Occurrences: 53%

Name: Erik Wallace          Date: Monday, September 24th, 2012
Observer: Jessica Sargent
Setting: Classroom
Time started: 9:00am
Time ended: 10:15am
Interval length: 75 minutes in 5-minute intervals

<table>
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X = Yes
O = No

5. Target behaviour: On-task
6. Occurrences: 7
7. Number of Intervals Recorded: 15
8. Percentage Occurrences: 45%

Name: Erik Wallace          Date: Tuesday, September 25th, 2012
Observer: Jessica Sargent
Setting: Classroom
Time started: 9:00am
**Time ended:** 10:15am

**Interval length:** 75 minutes in 5-minute intervals

<table>
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X = Yes

O = No

1. **Target behaviour:** On-task
2. **Occurrences:** 8
3. **Number of Intervals Recorded:** 15
4. **Percentage Occurrences:** 53%

**Name:** Erik Wallace  
**Date:** Wednesday, September 26\(^{th}\), 2012

**Observer:** Jessica Sargent

**Setting:** Classroom

**Time started:** 9:00am

**Time ended:** 10:15am

**Interval length:** 75 minutes in 5-minute intervals

<table>
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</tbody>
</table>
1. **Target behaviour:** On-task
2. **Occurrences:** 9
3. **Number of Intervals Recorded:** 15
4. **Percentage Occurrences:** 60%

**Name:** Erik Wallace  
**Date:** Thursday, September 27th, 2012

**Observer:** Jessica Sargent

**Setting:** Classroom

**Time started:** 9:00am

**Time ended:** 10:15am

**Interval length:** 75 minutes in 5-minute intervals

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**X = Yes**

**O = No**

1. **Target behaviour:** On-task
2. **Occurrences:** 8
3. **Number of Intervals Recorded:** 15
4. **Percentage Occurrences:** 53%
Name: Erik Wallace

Date: Friday, September 28th, 2012

Observer: Jessica Sargent

Setting: Classroom

Time started: 9:00am

Time ended: 10:15am

Interval length: 75 minutes in 5-minute intervals

<table>
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</table>

X = Yes

O = No

1. Target behaviour: On-task
2. Occurrences: 9
3. Number of Intervals Recorded: 15
4. Percentage Occurrences: 60%

Name: Erik Wallace

Date: Monday, September 29th, 2012

Observer: Jessica Sargent

Setting: Classroom

Time started: 9:00am
**Time ended:** 10:15am

**Interval length:** 75 minutes in 5-minute intervals

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X = Yes

O = No

1. **Target behaviour:** On-task
2. **Occurrences:** 9
3. **Number of Intervals Recorded:** 15
4. **Percentage Occurrences:** 60%
Name: Erik Wallace  
Date: Tuesday, October 1\textsuperscript{st}, 2012

Observer: Jessica Sargent

Setting: Classroom

Time started: 9:00am

Time ended: 10:15am

Interval length: 75 minutes in 5-minute intervals

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X = Yes 

O = No

1. Target behaviour: On-task
2. Occurrences: 9
3. Number of Intervals Recorded: 15
4. Percentage Occurrences: 60%

Name: Erik Wallace  
Date: Wednesday, October 3\textsuperscript{rd}, 2012

Observer: Jessica Sargent

Setting: Classroom

Time started: 9:00am

Time ended: 10:15am

Interval length: 75 minutes in 5-minute intervals
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X = Yes

O = No

1. **Target behaviour:** On-task
2. **Occurrences:** 9
3. **Number of Intervals Recorded:** 15
4. **Percentage Occurrences:** 60%

**Name:** Erik Wallace  
**Date:** Thursday, October 4\textsuperscript{th}, 2012

**Observer:** Jessica Sargent

**Setting:** Classroom

**Time started:** 9:00am

**Time ended:** 10:15am

**Interval length:** 75 minutes in 5-minute intervals
O = No

1. Target behaviour: On-task
2. Occurrences: 10
3. Number of Intervals Recorded: 15
4. Percentage Occurrences: 66%

Name: Erik Wallace
Date: Friday, October 5th, 2012

Observer: Jessica Sargent

Setting: Classroom

Time started: 9:00am

Time ended: 10:15am

Interval length: 75 minutes in 5-minute intervals

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X = Yes

O = No

1. Target behaviour: On-task
2. Occurrences: 10
3. Number of Intervals Recorded: 15
4. Percentage Occurrences: 66%

Name: Erik Wallace
Date: Monday, October 8th, 2012

Observer: Jessica Sargent

Setting: Classroom

Time started: 9:00am
Time ended: 10:15am

Interval length: 75 minutes in 5-minute intervals

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X = Yes
O = No

1. Target behaviour: On-task
2. Occurrences: 10
3. Number of Intervals Recorded: 15
4. Percentage Occurrences: 66%

Name: Erik Wallace
Date: Tuesday, October 9th, 2012
Observer: Jessica Sargent
Setting: Classroom
Time started: 9:00am
Time ended: 10:15am
Interval length: 75 minutes in 5-minute intervals

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</table>
1. **Target behaviour:** On-task
2. **Occurrences:** 10
3. **Number of Intervals Recorded:** 15
4. **Percentage Occurrences:** 66%

**Name:** Erik Wallace

**Date:** Wednesday, October 10th, 2012

**Observer:** Jessica Sargent

**Setting:** Classroom

**Time started:** 9:00am

**Time ended:** 10:15am

**Interval length:** 75 minutes in 5-minute intervals

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**X = Yes**

**O = No**

1. **Target behaviour:** On-task
2. **Occurrences:** 9
3. **Number of Intervals Recorded:** 15
4. **Percentage Occurrences:** 60%
**Name:** Erik Wallace  
**Date:** Thursday, October 11\(^{th}\), 2012

**Observer:** Jessica Sargent  
**Setting:** Classroom  
**Time started:** 9:00am  
**Time ended:** 10:15am  
**Interval length:** 75 minutes in 5-minute intervals

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X = Yes  
O = No

1. **Target behaviour:** On-task  
2. **Occurrences:** 11  
3. **Number of Intervals Recorded:** 15  
4. **Percentage Occurrences:** 73%

**Name:** Erik Wallace  
**Date:** Friday, October 12\(^{th}\), 2012

**Observer:** Jessica Sargent  
**Setting:** Classroom
**Time started:** 9:00am  
**Time ended:** 10:15am  
**Interval length:** 75 minutes in 5-minute intervals

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X = Yes  
O = No  

1. **Target behaviour:** On-task  
2. **Occurrences:** 12  
3. **Number of Intervals Recorded:** 15  
4. **Percentage Occurrences:** 83%
APPENDIX J: Graph of Erik’s On-task Behaviour during Baseline and Intervention