Listen for the Bass Note

Investigating the way hand-drumming circles
can support children with Special Learning Needs
in the self-regulation of their behaviour.

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Contents

Dedication

Dedicated to
all the wonderful children who have crossed my path
and marched to the beat of their own drum
alongside me.

Abstract

Purpose

In educational circles it is a well-known fact that children with special learning needs often exhibit challenging behaviour. It is understood that this is partially due to their impaired social and communication skills. Dealing with this challenging behaviour in the classroom and home setting is fraught with difficulties. An intervention is required that is both cost-effective and practical. Music therapy has been a medium that is often successful in when working with Special Needs children. The drum-circles were held in the form of the Holyoake DRUMBEAT program which is a flexible program and has been adapted for Primary Schools. The sessions included both drumming skills and an element of social skills and behaviour strategies. This research investigates the short-term effect that the DRUMBEAT program, consisting of weekly hand-drumming sessions, has on children with Special Learning Needs, in supporting them to better self-regulate their behaviour.

Methodology

Within a larger group setting a focus group of six students were observed over a period of ten sessions. Parents/caregivers and Teachers were asked to comment on their ability to self-regulate before and after the program. The subjects themselves were also questioned about how they perceived their self-management skills regarding their behaviour, both before and after the intervention. A qualitative analysis was made of the parents and teachers, and the student's own perception of the ability to self-regulate, and how the program had impacted on them.

Findings

After ten DRUMBEAT sessions all of the students exhibited positive changes is at least two of the four behavioural areas highlighted in the research. This finding was underscored by data collected from all participant groups: teachers, parents and the students themselves.

Value

Drum circles are a practical and effective intervention for children that struggle with behaviour challenges due to their special learning needs. After ten sessions, they exhibited an improved measure of respect, were more polite and compliant, were able to manage themselves better and they were less likely to breach codes of conduct. Most encouraging, the students felt more confident, had a better self-image and could verbalise feelings of improved self-worth and belonging.

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Glossary of 'Special Needs' Terms

ADD / ADHD Attention Deficit (Hyperactivity) Disorder

A behavioural disorder, ADHD children have a high level of energy and find it hard to sit still for a prolonged period. They are impulsive, impatient and easily distracted, making access to traditional classroom learning difficult. (Bussing et al, 2013). ADD is diagnosed when an excessively short attention span is diagnosed, and hyperactivity is not present.

ASD / AS Autism Spectrum Disorder / Asperger's Syndrome

Autism (ASD) is a pervasive developmental disorder which results in children having impaired social, communication and sometimes physical impairments. (Bussing, 2013). Autistic students will typically find it hard to be part of a group, and do not easily open up to others emotionally. They are very strongly compelled to stick to set routines and structures.

Asperger's Syndrome (AS) is included in the Autism spectrum, but these children often functioning on a higher level, and will usually manifest outwardly as being socially awkward, blurting out their thoughts and misunderstanding social nuances. (SPELD, 2013).

Dyslexia

This phonological-based learning disability makes it difficult for students to read or spell, or string together or unravel the phonic sounds that make words. (SPELD, 2013). Any typography-based activities are a challenge, and these children will often find it hard to discern left from right, or to cross their middle line (the imaginary line between the left and right side of the body).

Dyspraxia

This disorder is a neurologically based motor function impairment. These students will typically manifest as being clumsy, and struggling with fine-hand co-ordination. (SPELD, 2013).

ODD Oppositional Defiance Disorder

This disorder is diagnosed when a child persists in abnormally high incidents of defiant and rude behaviour towards figures of authority. It manifests as extreme hostility and non-compliance with deliberate or persistent testing of limits. (Bussing, 2013).

Selective Mutism

An anxiety disorder, these students will consistently refrain from using verbal language in specific social settings, despite speaking in other situations. (Bussing, 2013). They are sometimes able to whisper or use non-verbal language to communicate with others in settings where they do feel at ease.

Chapter One: Introduction

Background

In the small town in Zimbabwe where I grew up, the distant sound of the Matabele drums at dusk was the signal for children to greet their playmates and head home. The polytonal sounds in the warmth of the African late afternoon created a feeling of security, and resonated with our grumbling stomachs – so conditioned were we that a delicious hot dinner would be waiting when we got home.

As a child, one is not aware that all children are not 'normal'. We had a cousin with severe physical disabilities due to childhood Poliomyelitis - and another with Asperger's Syndrome. Their conditions (the term 'Special Needs' was never used in those days) impacted on their learning, and we all knew that they were 'a bit slow' in some regards. 'Naughtiness' was frowned upon, and not allowed, but we tacitly understood that these two boys were prone to temper tantrums and bouts of extreme frustration, and that it was due to their special learning needs. In those days, such children were usually sent off to 'homes', but our family believed that they should be integrated into mainstream society. We all played together in the dusty red fields, helping them up when they fell, and bickering and squabbling when they were being 'awful'. At family events we would all gather around my aunt's big, yellow piano in the high-ceilinged lounge on the tobacco farm to sing the night away, accompanied by a variety of guitars, harmonicas, banjos and an accordion. Both of those cousins were able to hold down jobs later in their lives, and although both continued to have social interaction problems, they led a useful life contributing to society. I believe that the role of music in their childhood and later, helped them to cope with their unique challenges.

In 1986 I became a Primary School Teacher, and over the years many children with physical, social, mental or other learning problems have crossed my path. Almost all of them exhibited behavioural challenges, probably due to the frustration at having to cope with their disabilities in a world not always designed to cater to their needs. I started noticing how these children's behaviour mellowed and improved when any form of music was introduced. Some were exceptionally musically talented. Others just enjoyed the rhythms. All of them responded positively to music.

In the Primary School we are not resourced with Music Therapists, and children have little or no access to such services. Pondering this predicament, I have always been on the lookout for ways to adapt my music program to suit children with Special Needs. I already knew that I had made an impact on such children in my choir. Children, who in their classrooms would be disruptive and defiant, would stand quietly singing, like everyone else during the 45 minute choir session. I had also seen some amazing transformations during percussion orchestra lessons, and especially witnessed the enjoyment of Special Needs children who normally didn't interact much in the classroom situation.

In 2009 I was given the opportunity to receive training from the Holyoake Institute who have developed a hand-drumming program called DRUMBEAT. DRUMBEAT is a flexible program which I was able to adapt to suit the needs of Primary School students. For the past three years DRUMBEAT has allowed me to pursue my quest in providing a means to support students with behaviour problems (sometimes due to Special

Learning Needs). The program reinforces self-regulation in a way which not only appeals to learners, and is fun, but also increases their self-esteem.

The acronym 'DRUMBEAT' stands for Discovering Relationships Using Music, Beliefs, Emotions, Attitudes and Thoughts. The program aims to engage, connect, entertain and encourage participants while allowing the expression of creativity and reducing anxiety and stress. The medium is the African Djembe drum – an instrument I had an immediate affinity for, having grown up with the rhythm of the Matabele drums in the background. The djembe is easy to play, relatively economical, available in sizes suitable for Primary School pupils and the program is designed to be highly engaging, and interactive. It must be noted however that DRUMBEAT is not a cultural program and does not teach traditional African rhythms.

The goal is to teach participants, through a combination of cognitive behaviour therapy and physical interactions, how to cooperate, collaborate and communicate in a non-threatening and non-judgmental environment.

The DRUMBEAT program, adapted for Primary School ages, uses a range of simple, repetitive drum patterns and songs to engage students in the pleasure of making music in a group. Life-skills such as coping with bullying, peer-pressure and following rules are all illustrated with the help of drumming activities. Students are encouraged to discuss their feelings and thoughts, and share their experiences and lessons learnt in a safe, closed setting.

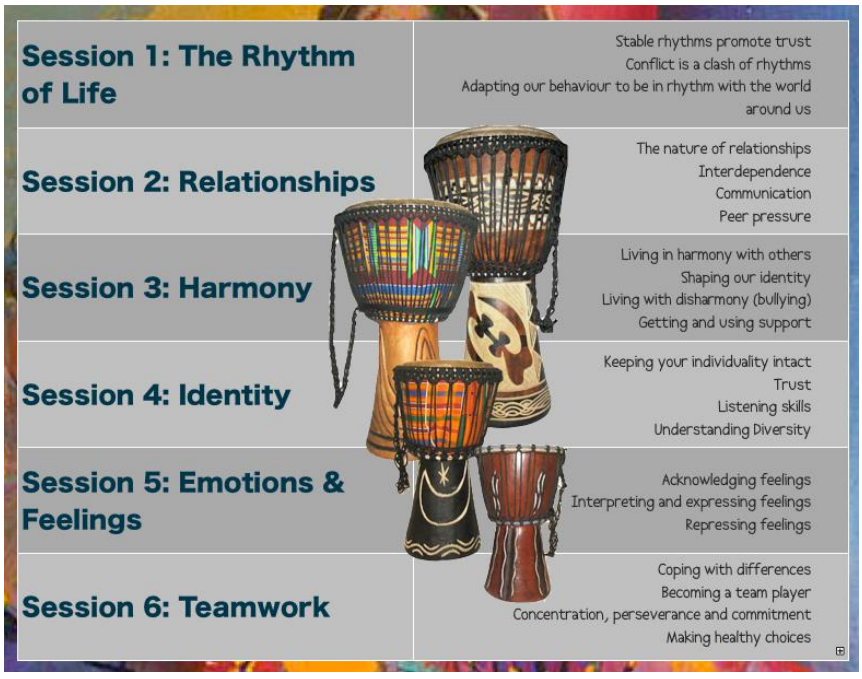


Figure 1: Session structure - The DRUMBEAT program,

The first six sessions cover a variety of life skills, as illustrated here. The next three sessions are typically used to reinforce any areas of concern, create a collaborative composition, and rehearse for the final performance.

At the end of their ten sessions the group performs in front of an audience, and the thrill of being able to share their art is obvious. Many teachers and parents comment on how pleasantly surprised they are at the confidence and ease with which these students perform.

To illustrate my own experience with the benefits of hand-drumming, I would like to introduce a boy I will call 'Andrew'. He is severely autistic, leading to impaired learning abilities. His behaviour in the classroom is extremely challenging, he has exceptionally poor social skills and he is not willing to engage in social interaction; however, he is extremely musical. Frankly, I was initially quite intimidated by having him in my drum circle, knowing how disruptive he could be. At the start he participated in drumming, but there was not

much verbal contribution during the discussions. Gradually he became so comfortable within the drum circle, that during our last session he spontaneously initiated a 'call-and-response' activity while waiting for me. Not only did he direct the class, he also encouraged the participation of others, calling them by their names when he wanted them to call the rhythms. (This is a boy who the previous year spent many lunch hours perched on top of the playground equipment, being cajoled to come down.)

Another one of my earlier DRUMBEAT pupils, 'Rosie', had severe problems with anger management, due to both a history of abuse at home, and Asperger's Syndrome. Her lack of social communication skills had severely curtailed her learning, and she was more often sitting outside the classroom than in it! After six drumming sessions I started noticing her calmly encouraging others with a raised eyebrow, or calling out the rhythms when they lost the beat. Long after the drumming sessions had ended, Rosie continued to get along better with her peers and be involved in noticeably fewer behaviour related incidents. Last week Rosie popped in to see me – she is now in her final year of Intermediate school, and has progressed beautifully, turning into a poised, self-confident young lady. We talked a bit about how she was doing, and she told me that DRUMBEAT had been the turning point for her.

'Harrison', a severely Autistic boy, had such serious behaviour problems that most teachers refused to have him in their programs. He had a full-time teacher aide, and was on medication to calm him down. He had severe temper tantrums, and while he was extremely vocal, he was not able to engage in reciprocal conversations. Harry started attending DRUMBEAT, and from the first day insisted in 'drumming to his own rhythm'. Slowly, but surely, he started falling into the rhythm, and learnt to at least play the bass note with the rest of the circle. At the same time I noticed that he started to respond during discussions, and was able to comment on other children's participation. By the end of ten weeks he participated flawlessly in our performance in front of the whole school. His teacher reported improved two-way communication, and his parents bought him his own djembe, and reported that it was helping him get his emotions under control, and that he was using it on a daily basis as an outlet for his anger. Harrison is now attending an Intermediate school, and his parents recently reported to me that he is still drumming at home on days when his emotions overcome him. He has also just been included in the Auckland Boys' Choir – a huge achievement for this boy as self-management is a huge factor in being chosen.

Summary

The aim of my research is to investigate the measure of support children who have Special Learning Needs can gain in learning to regulate their own behaviour, by participating in a drum circle. After considering and reviewing the literature discussed, I am convinced that not only is there a definite need for this intervention, but that it is possible to harness the power of hand-drumming to facilitate this change in students regulation of their behaviour. I will be focussing especially on evaluating the perceptions of teachers and caregivers, for if they can see a change in their Special Needs Student's self-regulation, then surely the student's intrinsic set of behaviour patterns has been adjusted. I will also be observing the subject's own perceptions of their progress regarding their ability to regulate their behaviour when faced with challenging situations, by applying the skills learnt in the DRUMBEAT class.

Chapter Two: Literature Review

Introduction

In this chapter I would like to discuss the findings of various researchers, both in New Zealand, and internationally, in the field covering my research, and add my own critique of their findings.

I will discuss what is meant by 'special learning needs', and in what way these children's social interaction typically becomes impaired in a Primary School setting. I will go on to describe the link between challenging behaviour and special learning needs. A short discussion follows about the need for intervention, both for parents and teachers. This leads to an overview of some of the behaviour management issues both in homes and at schools, and my view on why they may be failing or showing some measure of success. Many people argue that children with Special Needs are unable to 'self-regulate' and this argument is addressed next. Music therapy is widely used to support people with Special Needs, and I discuss the benefits and some of the methods that can be applied. This leads to a focus on hand-drumming as a specific therapy, and explains some of the findings that underscore my research project.

Defining 'Special Learning Needs'

For purposes of this research I am using the terms 'Special Learning Needs' and 'Special Needs' interchangeably as an umbrella term to include all factors that create significant learning challenges in children. These could be Specific Learning Disorders such as disorders in psychological processing, disorders such as Dyslexia or Dyspraxia, mental impairments such as those caused by minimal brain dysfunction, or pervasive developmental disorders such as Autism-spectrum Disorders, including Asperger's Syndrome. (SPELD, 2009). Children with learning difficulties as a result of physical disabilities, such as impaired hearing or loss of sight are included in this research. Learning can also be affected by socio-economic factors such as impaired home life, or even physical discomfort such as a reaction to an allergen, but this research is not focused on subjects that fit into that particular profile, although some of them may have this additional disadvantage. All of these disorders seem to go hand in hand with social or communication problems, and challenging behaviour.

The link between 'Challenging Behaviour' and 'Special Learning Needs'.

Challenging behaviour can be loosely defined as negative social interaction or non-compliance that disrupts a child's learning by causing a threat or discomfort to others, and/or by jeopardising their own learning or social development. (Langley, 2008; Emerson & Einfeld, 2011, p7). For the purposes of this research no distinction will be made between gender, the severity of behavioral incidents, the causes of challenging

behaviour or the frequency of disruptions. If a child is perceived to exhibit challenging behaviour by either the teacher or the caregiver, it will be accepted as such.

Research suggests that behaviour issues amongst children with Special Needs, is a significant problem. Children with learning difficulties very often display challenging behaviour both in the classroom, and at home. (Balson, 1992; Rogers, 1998; Chaplain, 2003). This has certainly been my experience over the almost two and a half decades that I have spent in the classroom. The behaviour seems to be the result of frustration, lack of verbal skills and feelings of inadequacy.

A commonality across these disorders is that these children typically exhibit socially inadequacies, manifesting as challenging behaviour. (Tonge, 2007). They may feel emotions like frustration, anger, anxiety and depression, impairment of social interaction and communication problems. (SPELD, 2009; LBCTNZ, n.d.). The challenging behaviour not only affects those around them, but also with their own quality of life, ability to access learning, and opportunity to forge meaningful family and social relationships. (Emerson, Moss, & Kiernan, 1999). Walker, Ramsey, & Gresham (2004, p4) regard this antisocial behaviour, as the most destructive element of challenging behaviour, especially as it invariably leads to a future of failed relationships.

Children with Special Learning Needs are often misunderstood. Their behaviour, and social interaction, which to the world around them seems strange, or weird, is perfectly normal to them. What they are trying to communicate is their innovative view of the world, but the world is not ready to understand their stance. This is where so-called 'behaviour challenges' begin to manifest, and lead to inability to focus on their learning and to impairments in their social interactions within an educational environment. In the Primary School these children, who are often able to learn self-regulatory skills as they mature, are still especially vulnerable, as they do not yet have the skills to communicate their desires, fears and frustrations.

"Behaviour in ways that others identify as "challenging" or problematic is not exclusive to people with autism. It is part of being human. Most of our behaviours reflect attempts to meet our needs, satisfy our desires, cope with frustrations and high levels of emotion." (Clements and Zarkowska, 2000, p47).

Do caregivers and teachers have a need for intervention?

The Statistics NZ Disability Survey (2006) estimates that as many as 5% of children between the ages of 0 – 14 years have special education needs. From observing my current teaching environment, I suspect that this figure is actually higher, and at my school (Decile 6) most classrooms have at least two students with Special Learning Needs. My opinion is underscored by the ERO report 'Education and Pacific Peoples - Statistics New Zealand' (2013) regarding the disproportionate number of Pacific students that are not accessing funding. Reasons mentioned are 1. The application process itself, with ensuing language barriers, 2. A lack of awareness of Special Needs, 3. Cultural barriers.

As Meyer and Evans (2006) remark, the growing international media awareness of child behavioural challenges, reflected by TV programs like 'Supernanny', suggests that neither educators nor caregivers are coping and that intervention is required. With the increase of behaviour challenges in our schools, *New*

Zealand Post Primary Teachers' Association (NZPPT, 2006) have advocated that programs need to be put in place that encourage better self-management, social interaction and improved communication in our schools.

In response to teacher's growing concern over a lack of support regarding behaviour management a fascinating review was published by the NZPPT (2006). They found that behaviour management challenges were prevalent across the world, and increasingly so. Many important studies (Elton, 1989; Chaplain, 2003; Rogers, 2006) suggest that teachers are not coping with the disruptive behaviours, and need both professional development and intervention to survive effectively in the classroom.

Sleicher (2012) reports that across OECD countries, the highest need for professional development are in this order: 1. skills to teach children with Special Learning Needs, 2. IT teaching skills, 3. Behaviour Management strategies. In NZ teachers enter the profession with good ICT skills, but very little training in either Special Needs or Behaviour Management, possibly explaining why our Special Needs students are often the ones that cause the most disruption in the classroom. I suspect that it is often a case of teachers not being equipped well to deal with this group of students' unique needs, which in turn can lead to frustration, anger and challenging behaviour in these Special Needs students.

Teachers that I work with report feeling isolated and without a support system regarding the challenging behaviours of Special Needs students. The reality is that there is little or no support for us as teachers. The NZ Ministry of Education website offers the following advice for Educators struggling with Special Needs students:

"If you're an educator and you're new to the special education system, talk to your school's Special Education Needs Coordinator (SENCO) if you have one, or a Resource Teacher: Learning and Behaviour (RTLB), or call your nearest Special Education district office. You can also visit our educator website SE Online [External website] for school and classroom strategies, tips and tools."

On the 'Special Education Online' (http://seonline.tki.org.nz/Educator-tools) website the "classroom strategies, tips and tools" they promise, are nowhere to be seen; they do, however, suggest one refers to the Ministry of Education library for further help. In-school SENCO's apply for support, but funding is allocated on a very limited basis. For example last year I had in my class an 11 year old student, 'Debbie', with very high needs: She was diagnosed with Selective Mutism, Autism and had a severe facial tick and muscle spasms, resulting in frequent disruptive behavioral incidents. She also had low muscle tone, which led to her wetting herself. Her learning ability was severely impaired and she was unable to reach the National Standard required for Year 6 (or even Year 4) in any of the core subjects. In spite of her high needs we were still unable to secure ORRS funding for her, as her disabilities were not deemed severe enough, and neither was I given any in-class support or advice regarding her Special Learning Needs. Teachers that I have discussed the issue with from across several schools, agree that the RTLB system is often unavailable or inaccessible, supposedly due to their high case load. Except for a once-off visit, I have certainly not had any help from an RTLB in my seven years of teaching in NZ schools.

Just like teachers, caregivers have varying levels of success in coping with the challenging behaviour of Special Needs children. I have seen parents who are totally overwhelmed by the demands of their Special

Needs child, whereas others are totally in control and have put structures in place to assist both themselves and the child in managing disruptive behaviour. Caregivers are able to turn to various websites and outside agencies, and some do so, but often I hear from parents that they, too, feel isolated and depend on the teachers to guide and lead them. From personal conversations with parents it is evident that it can be very stressful and hard work to be consistent and successful in supporting these children to self-regulate their behaviour, and parents needs intervention, and tools to cope.

Nevertheless, research has shown that disruptive behaviours in early childhood almost always lead to impaired choices later on in life, often impacting negatively on social communities. It is important that interventions be put in place early on before disruptive, antisocial behaviour becomes entrenched. (Tichovolsky, 2011).

The scenarios I have sketched above illustrates that both caregivers and teachers are in desperate need for an intervention to support them with the challenging behaviours exhibited by children with Special Learning Needs.

Behaviour Management at home and in the classroom.

Children exhibiting challenging behaviour are often seen to be 'playing up' for one person – teacher or caregiver - when another is able to calm and manage them exceedingly well.

I have long observed a varying degree of success in classrooms regarding the behaviour management, not just of Special Needs students, but on the whole. Whilst some teachers rarely have any problems, others are calling for support from Management on a daily basis. Observations over more than two decades of teaching have led me to believe that the difference in success lies in the classroom climate. Teachers who have peaceful, structured classrooms, have nurtured individual relationships with their students, set well-defined routines, use hands-on systems and are child-focused, with high-interest and engaging tasks set for their students, seldom have significant classroom management problems with main-steam or special needs students. (Monsen & Frederikson, 2004). In a peaceful, structured environment, should the Special Needs student present behaviour problems, maybe due to their lack of self-regulating skills, they can easily be approached individually, as the other students will be working independently. Absolum (2006) advocates 'Learning Focused Relationships', and following his advice certainly goes a long way towards creating this climate. By creating a climate of learning, where there are a minimum of disruptive episodes, more individual attention can be given to Special Needs students, to support them in self-regulation. My personal behaviour management strategies are underscored by the NZPPT (2006) review where it states:

"*Respectful classrooms promote good behaviour. The need for good manners, respectful relationships, quiet voices and careful movement permeates the literature. Students may not have the social competence to work in a situation where there are a number of other students. Teachers, therefore, need to model for students the behaviour that they want to see in the class. Peaceful classrooms show that the quality of relationships is valued.*"

We know that the quality of relationships within the classroom, not just between peers, but between student

and teacher is central to successful behaviour management. Challenging behaviour can be negatively exacerbated by a lack of effective relationships and "interactions with teachers and peers, and school wide policies that convey to students low expectations about their learning capacity". (Weinstein, 2002 as cited by Langley, 2008).

Apart from in-school PD opportunities, teachers typically depend on the newest education literature to support them in their quest for improving their practice. This very literature sometimes inadvertently leads to the breakdown in classroom management strategies, for example the popular writings of 'The Hidden lives of Learners' author, Graham Nuthall. (Nuthall, 2007). His studies mainly suggest that students learn best when collaboration takes place. I share his sentiment, but only when the conversations are topic based, and focused on the intended learning outcomes. Teachers tend to misinterpret his findings as meaning that students should be allowed to chatter away all the time in the classroom. I am of the conviction that this misconception has resulted in a majority of noisy, unstructured and disruptive classrooms, with children yelling out answers, talking loudly and supposedly engaging in 'collaborative' learning. Some teachers believe that this classroom atmosphere promotes learning, but for the Special Needs student, it is a not ideal. It is no surprise that Special Needs students' challenging behavior accelerates in this kind of classroom climate. (Hayes, 2012). One of my Asperger's Syndrome students recently mentioned to me that he is happier in a classroom "where I can hear myself thinking". Students with Special Learning Needs want to feel that they are accepted by both peers and teachers, and that their specific needs are understood in the classroom. Research has shown that an inclusive, adapted climate lead to less incidents of challenging behaviour. (Monsen & Frederickson, 2004).

Teachers are sometimes quick to assume that the behaviours they see in the classroom are the result of poor parenting skills. An interesting thesis written by Tichovolsky (2011) researches the effect that parents have on changes in child behaviour patterns over time. The research was based on the surmise that behaviour patterns in children almost always changed at the same time as starting formal education (in pre-school). The author cites various sources that suggest that both ends of the parenting spectrum, namely too harsh discipline versus permissive or inconsistent parenting styles could be disadvantageous to children's behaviour management. She also mentions the role of ethnicity, expecting to see that some cultures were excessively strict in applying discipline, whilst in other culture groups children are given more freedom. Single parents were also expected to be struggling more with behaviour management than two-parent families. According to her study, parent depression could be another major factor in behaviour management, and a predictor of future behaviour problems.

Interestingly, the only factor that had a significant influence on behaviour management was that of single-parenthood, supposedly due to the increased stress, lack of partner support and financial hardship often found in such families. Even this factor was restricted to certain ethnic groups, and in some groups was not significant at all. Other factors such as discipline styles, depression in parents and ethnicity were ruled out. Could the findings of this study suggest that repeated disruptive behaviour cannot be blamed on parents, but could sometimes be the result of the classroom management style, and therefore the teacher?

In summary we find that creating a safe and inclusive classroom climate where students can actively participate and integrate on a social level, and feel valued, contributes to the management of behaviour of

students with Special Needs. (Monsen & Frederikson, 2004). No single magic solution seems to be available for parents and/or caregivers to fall back on, and literature underscores how necessary it is to equip students with tools for self-regulation.

Self-regulation: is it possible?

The term 'self-regulation' refers to a person's ability to choose the preferred reaction when faced with a trigger that is upsetting or creates some kind of internal or external conflict. Children who exhibit challenging behaviour are not able to regulate their reactions, which results in a situation where they are perceived to be disruptive. Other children, who face the same situation, may be able to respond in a more socially acceptable way, diverting the crisis without disruption. They are seen to be 'self-regulating' or having good 'self-management skills'.

While gender is not the focus of this research, it is common knowledge that boys are more likely to create disruptions in the classroom or home, and the topic certainly requires a mention. In 'Growing great boys', Ian Grant (2006) quotes Dr Michal Gurian as saying that boys "are mostly just young Huckleberry Finns, whose environments need to be modified to have a lot less electronic stimulation, and more calm routines and outdoor activities." This was illustrated powerfully when Denver, an 11 year old dyslexic boy, was recently transferred to my classroom after his teacher continued to struggle to cope with daily incidents of bullying, disruptive and challenging behaviour and rude and defiant actions. The teacher is an advocate of modern teaching methods, uses the newest ICT tools, a strong AFL approach, and prides herself on a collaborative classroom. Students are expected to self-manage, reflect on their learning and formulate their own learning goals. For many children, this is the ideal environment, and they are thriving. Denver is a bright, inquiring, typically boisterous boy, but he seemed angry and resentful, and played up at every opportunity when I first met him. His excuse for all of this disruption was the typical "But they..." that Tichovolsky (2011) so aptly mentions. He needed a calmer, more structured approach, and a new start. The new teacher started by adapting a combination of a positive teacher-student relationship, a quieter learning-focused classroom climate, and by having a few good conversations, setting clear boundaries and equipping him with a few life-skills. He was also included in a DRUMBEAT group. Now, two terms later, Denver has not exhibited a single incident of any of the previously mentioned behaviours in his new classroom. He has *chosen* to react differently to undesirable triggers and is self-regulating on a daily basis.

Girls and boys with Special Learning needs are as able to learn a new set of behaviours with which to externalise their feelings, (unless there are severe cognitive delays), as children with no known impediments to their learning. All children need to be taught how to handle their emotions, and what appropriate reactions are to thwarted wants, anger, fear and frustration. The majority of children can be taught to stop and think about their choices. Of course, some children, and this often includes children with Special Learning needs, require more explicit intervention in regards to learning to managing anger, social interaction problem-solving and conflict resolution. (National Association of School Psychologists, USA, 2013).

Vygotskiĭ (1978) talks about how the 'zone of proximal development' includes not only subject matter that is at the right level, but also an environment where children are interacting effectively "in co-operation with their peers" to be able to "awaken internal developmental processes". This is a clear indication that children can learn to choose their actions, if we give them the right tools and space to do it in.

From my own experience, observations of colleagues' practices, discussions with parents and by referring to the above-mentioned literature, I am convinced that children can be taught to regulate their own behaviour, but that this takes time, patience and structured, appropriate intervention while providing the climate that is most suited to their social development.

Music Therapy for Children with Special Learning Needs

Music therapy is recognized as an established allied health profession that uses music to facilitate therapeutic processes. (Davis, Gfeller, Thaut, 1999). There are mainly two problem areas addressed by music therapy, namely communication and social behaviour. (Kaplan & Steele, 2005)

Music Therapy is widely used to support children with learning disabilities and related behaviour problems. Therapists from the music therapy program run by Breadline Africa have found that both social skills and communication skills and even concentration improve. With the help of music, these children's frustration at their lack of adequate communication skills is released and they find an alternative mode of communication. (Breadline Africa website, 2011). In their research Kemper and Danhauer (2005) found that music could be used to improve patient's mood and eliminate negative emotions. It has the bonus of being convenient and easily accessible.

We cannot be complacent in assuming that these claims are founded, however. In a small study (n=24) by Gold, Wigram and Elefant (2006), which specifically focused on autistic children, they examined the short-term effect of brief music therapy interventions (daily sessions over one week) for autistic children. They concluded that the effects on behaviour were insignificant, but that the participant's communication skills improved markedly. They suggested that more research was needed to examine whether the effects of music therapy are enduring, and to investigate the effects of music therapy in typical clinical practice.

In a study on the effects of music therapy on the behaviour of aggressive teenage boys it was found that the delivery needed to be highly structured in order to be effective. In some cases, where students were given the choice of music and activities, the undesirable behaviour was actually exacerbated after a therapy session. This was due to their choice of music which included lyrics with aggresive and anti-social messages. (Rickson & Watkins, 2003).

There may currently be limited research evidence that suggests that music will indeed support behaviour modification in the long-term, but as a tool to improve communication it is well worth implementing in Primary Schools. Children with Special Needs can benefit from music therapy without alienation or placing undue focus on them, as music is part of the learning areas defined in the NZ Curriculum (2007), and can easily be integrated with other learning areas. I believe that much of their frustration – leading to impaired social

behaviour – stems from impaired communication skills. Helping them to find a communication outlet must then influence their social skills and behaviour.

In an article from the Canadian Health and Lifestyle Magazine, Esther Thane, a music therapist, says aptly that she believes that music therapy "gives children the opportunity to explore their emotions without going to a verbal place." (Beckett, 2011). Inclusion in DRUMBEAT is the ideal medium for this 'non-verbal' communication to take place.

The Benefits of Hand Drumming

Mystics and shaman across the ages have long believed that drumming and drum circles have mind-altering benefits, inducing relaxation, altered sense of well-being and overcoming addictions. While all music therapy may not be successful in improving behaviour skills, hand drumming is a highly structured activity, and fits into the profile of the more successful interventions.

Hand-drumming activities mostly take place in a drum circle. The idea around a drum circle is that a small group of participants (usually ten or so) are able to face each other, take part in an intimate safe setting and have the confidence to communicate freely. Thwaites (2009) quotes Sylvia Ashton Warner where she explains how she realized that the Maori children were too shy to face their audience, and automatically turned toward each other in a circle, making music facing each other. With the high number of Maori and Pacific students in the program, a drum circle is also the ideal media for teaching music in line with Maori perspectives.

Arthur Hull is seen by many as the 'Father of Drum Circles'. He describes the magic of drum circles as follows in the following excerpt from his book:

It is an expression of spirit, emotion, excitement, and fun. Individual people are expressing themselves while contributing their spirit to the whole song. The energy in the circle that you help to create is itself a spontaneous, vibrant manifestation of the spirit of the people. It is ongoing, ever-changing rhythmical alchemy. The energy of the circle lends itself to spontaneity of expression by individuals. (Hull, 1978)

During drum circles I have repeatedly seen that Children with Special Needs are able to forget about their limitations, and fully engage in the moment, without inhibitions, expressing themselves not only in the rhythms, but drawing parallels to the activity and their own ability to be in charge of the expression of their emotions. They learn that you can freely regulate your behaviour, just like you can regulate your participation in a drumming circle.

Some unexpected benefits of hand-drumming are claimed by Bittman (2000) who became interested in the subject after attending a session run by Arthur Hull for medical professionals. During his medically-based research he found that not only did drumming promote key health benefits, such as exercise, visualization and self-expression, but that it stimulated the increase in "white blood cells that seek out and destroy cancer

and virally infected cells". While the research literature is riddled with medical terms beyond my understanding, the conclusion is very clear: "Drumming is a complex composite intervention with the potential to modulate specific neuroendocrine and neuro-immune parameters in a direction opposite to that expected with the classic stress response."

Winkelman (2003) who researched the benefits of drumming for recovering drug addicts, found the following benefits of drumming:

> *Drumming produces pleasurable experiences, enhanced awareness of preconscious dynamics, release of emotional trauma, and reintegration of self. Drumming alleviates self-centeredness, isolation, and alienation, creating a sense of connectedness with self and others.*

Although the focus of this research is not recovering drug addicts, but children with behaviour problems related to their Special Needs, it would be safe to assume that the same emotional and social benefits from regular drum circle participation as described above.

Drumming addresses many of the areas in which Special Needs children need support. For example in describing how the social behaviour of Autistic children impairs their learning, we learn that they exhibit a 'triumvirate' of traits, showing "poor social interaction and reciprocity; inability to effectively communicate, verbally or non-verbally; lack of social imagination, flexible thinking and imaginative play." (Cumine et al., 1998; Gillberg 2002).

In research undertaken at the Holyoake DRUMBEAT program, participants, caregivers and teachers were given questionnaires to complete before, during and after the ten-week program run with at-risk teenagers in Australia. Findings were consistent with my own observations. 77% of participants were reported to have more confidence, increased self-worth and recognition of achievement. Teachers reported a 60% improvement in behaviour, and far less incidents were reported in classroom log sheets. Participants felt strongly positive about their participation. Teachers found that student's who had previously lacked confidence, were far less shy and more likely to participate and contribute to class discussions. Another positive outcome was the increased attendance of participants, who all previously had poor attendance records.

In even more recent research Wood et al, (2013) report that a third of a large research group of high school students (n=180) showed less incidents in reported behaviour incidents and a 10 per cent increase in self - esteem score was shown at the end of the ten week DRUMBEAT program.

Faulkner (2004) and Smith (2001) (cited by Holyoake, 2009) both did formative evaluation of the potential of drumming in a school setting, and their findings supported the DRUMBEAT research report in underpinning the potential of music to improve students' behaviour and social skills. (Holyoake DRUMBEAT Research Report, 2009). The Holyoake DRUMBEAT Program (hereafter referred to as DRUMBEAT) is designed to address the social needs of children with at-risk behaviour. They aim to 'harness the therapeutic potential of musical expression, combining it with basic cognitive behavioural therapy to deliver a range of social learning outcomes.' Researchers of this program have noticed benefits such as improved relationships, self-esteem, emotional control and an increase in social competencies. Participants in a drum circle feel part of a group,

which reduces alienation, and helps young people form important social ties. (Christopher, Nangle & Hansen, 1993).

Disappointingly, in South Africa research by Flores (2011) on the effects of djembe drumming on the emotional well-being of Primary-aged students in residential care failed to prove that drumming had a sustained positive effect. 'Emotional Well-being' is described as "the essentially social construct which facilitates a child's capacity for effective emotional regulation and management of negative emotions, healthy self-esteem, capacity for self-motivation, the understanding of one's own emotions and accurate empathy with the emotional states of others". (Flores, 2011, p16). Flores's research seemed to be parallel to my own, in that it evaluated improved self-regulation as a result of djembe drumming, and therefore significant. The research subjects were different however, in that their challenging behaviour was not as a result of special learning needs, but rather as a result of socio-emotional needs.

The majority of the research subjects (n=16) exhibited challenging behaviour as a result of previous emotional or physical trauma. The research, which employed both qualitative and quantitative research methods, showed no significant change in the emotional well-being of the subjects. Some subjects even exhibited a higher level of anxiety than before. The failure in the intervention transferring positively to the subjects daily interactions can be ascribed to the severity of the student's socio-emotional difficulties, as well as limitations within the drumming intervention and research methods used. The drumming sessions did not include any form of cognitive or behaviour therapy or intervention, and were based in isolation on acquiring the skill of playing the djembe drum in a drum circle situation. Whilst the long-term effects could not be proved, the positive effects of the research during sessions described the students' enjoyment; increased playfulness; improved self-motivation, self-confidence and self-esteem; improved emotional self-regulation; a greater awareness of social interaction and mostly a sense of inclusion, which was highly rated by participants. Some of the difficulties described during this research included the participant's lack of literacy and language skills needed to complete questionnaires correctly. Many of the participants were speakers of other languages and not familiar with the language of the forms, or of the practitioners completing the assessments. A further challenge was the limited contact between the researcher and the participants, making a trust-relationship difficult, time-limitations and the constant shifting of co-facilitators, which influenced group dynamics. The research group was of mixed gender, and mixed ethnic groups, which in an African milieu as I know it, (where gender and cultural roles play a large part in social interaction), could be a predictor of the failure of obtaining significant data.

The delivery of the hand-drumming sessions differed from the DRUMBEAT program used in my research, in that a significant part of my program is based on the use of drumming activities to trigger discussions of strategies to become self-regulating regarding behaviour and social skills, rather than focused on the acquisition of musical skills.

Hull (1978) uses the term 'entrainment' to describe the intrinsic emotional growth that takes place during participation in a drum circle. He sums it up as follows:

Creating a successful group entrainment *is less about a person's rhythmical sensibility, and more about their willingness to dialogue, communicate and collaborate musically with the other players. In other words, to get to entrainment you want to play with your head up, and your eyes, ears and heart open.*

It is this very trait of hand-drumming that I am endeavouring to harness in order to bring about a positive effect on the behaviour of children with special learning needs. The research and literature indicate that this research is both meaningful and likely to have positive results.

Chapter Three: Methodology

General Research Question

During the pre-empirical stage of this research, the following questions were formulated, and have been further refined:

Can inclusion in regular hand-drumming circles support children with special learning needs in the self-regulation of their behaviour?

Specific Research Questions

- *Do parents perceive a change in the children's behaviour?*
- *Do teachers perceive a change in the children's behaviour?*
- *Do the participants' themselves feel empowered to self-regulate their behaviour?*

Introduction

This research is conducted in the style of Punch (2009) who suggests a simplified model of research, whereby research questions are formulated, a decision is made as to what data is needed to answer those questions, appropriate research design is planned, and the data is used to answer the research questions.

This chapter deals with the research design which will be used to collect and analyse the gathered data to answer the research question, and explains my thinking around selecting this specific research method. Empirical research is used to observe actual events or practices and to collect data which in turn is used to interpret and test ideas and practices. (Punch, 2005). This chapter explains the proposed research design by describing and justifying the paradigm and ensuing approach which will be used. This will be followed by a description of the sampling or selection method to identify research participants. A discussion of the ethical considerations will be included, along with a description of the data collection method/s.

Research Paradigm

Punch (2005, p17) describes a paradigm as "a set of assumptions about the social world, and about what constitutes proper techniques and topics for inquiry". Both Punch (2005) and Neuman (2003) point out that paradigms are constantly shifting and cannot be seen as set in stone. An example of paradigms that can be adopted in social research are positivism, interpretive social science and critical social science.

Neumann (2003) describes positivism as an approach whereby researchers use exact data and seek objective research by testing hypothesis against a careful analysis of the measured data. Criticism of positivism is seated around the fact that humans are reduced to numbers, and that the human element is lost in the application of abstract laws and formulae. According to him, interpretative Social Science concerns

itself with *hermeneutics* – the in-depth contemplation of a social phenomenon and the finding of links between it's parts. The interpretative approach is a study of social situations, by direct observation, in order to systematically analyse, interpret and understand the phenomenon's that arise in natural settings. Critical Social Science is defined by Neuman (2003, p81) as a "critical process of inquiry" that "helps people change conditions and build a better world for themselves."

Regardless of the paradigm chosen, social research in an educational setting such as the one this research project is seated in, concerns itself with providing information about human beings and the environment in which they exist. (Biesta & Burbules, 2003). As suggested by Punch (2005) this research will base methodological choices on *what* is being researched, namely whether inclusion in the DRUMBEAT hand-drumming programme can support students that have special learning needs, in better self-regulation. As the data is almost impossible to measure and quantify, a research seated in an interperatist paradigm is suggested, and will be followed.

Approach

The specific aim of this research is not to generate or test educational theories, but to understand and solve teaching and learning problems within the classroom context, thus falling neatly into the definition of 'qualitative research'.

This research aims to gather qualitative data and to anaylse or interpret it in such a way that the human element is taken into consideration, and the conclusion is based more on a general impression, than on finite numerical data. (Simon, 2011).

Qualitative approaches interpret human situations and ideas which is interpreted in depth and detail by

1) construction patterns of behaviour;

2) interpreting the social implication

3) analysing the effect of external factors on events.

Data is collected through direct observation or interviews. (Ary et al, 2006). Hoepl (1997, p46) sums up the differences in these two approaches by saying that quantitative researchers "seek causal determination, prediction and generalisation of findings", whereas qualitative researchers seek "illumination, understanding, and extrapolation to similar situations." The qualitative approach seems ideal for this research, as the participants are young children, their parents and their teachers, and the data gathered needs to give more an *impression* of the success of the intervention, than measure exact numerical values.

Hoepfl (1997) sums the characteristics of qualitative research up very neatly. Based on this, the aim of this research can be described as follows:

1. Research takes place in the natural setting of the subjects: in the Music room, during normal school hours and with peers.

I have at all times attempted to remain neutral, observing results as they unfold with no attempt to steer the course of the outcome in any other way than delivering the DRUMBEAT program in the way it is designed to be used.

2. Data collection is done by me as the researcher, in person. I am well known to the students, as I am a teacher at the school.
3. An inductive data analysis method is utilised. Johnson & Christensen (2004) describe this approach as an "immersion in the details and specifics of the data to discover important patterns, themes, and interrelationships; begins by exploring, then confirming, guided by analytical principles" (p. 362)
4. The research report maintains an informal, personal style, promoting a true description of the findings and challenges faced during the gathering of data.
5. Interesting idiosyncrasies of the subjects are mentioned, and the interpretation of these findings serves to illustrate and bring added meaning to the outcome of the research. Each case is viewed as unique, but as a whole the different types of data form the final perspective on which the inquiry is based.
6. The research aims to interpret the effect of the intervention on the subjects, and attempts to discover the perception of individuals as events unfold.
7. The research is not pre-determined, but rather emergent, and the design has been dictated by a natural process.
8. Care has been taken to preserve the integrity of the data, in order to remain trustworthy.

Punch (2005) suggests that a mixed approach ensures a balanced and realistic analysis of the data, taking both facts in the form of numerical data, and data derived from observation of and communication with participants into consideration. It could be argued that specific behaviour incidents could have been recorded, analysed and quantified, but after consideration the quantitave approach in isolation is seen as having too many variables to be accurate or meaningful for this study.

The participants in this research are parents and teachers, who are likely to have individual and varied abilities, challenges and preferences. Therefore the methodology followed will mostly be a qualitative approach. The qualitative approach takes the human element into consideration, which makes it more relevant to this study. (Lincoln & Guba, 1985).

Sampling / selection of research participants

In this study, the research focusses on a small population of students (n=6) who exhibit problems with self-regulation of their behaviour, as a result of factors which impede their ability to learn. These factors could include cognitive, physical or emotional needs. It is usually not possible to research all of the students in that population, and therefore a sample of students that fit the criteria will be selected from across a selection of

classes in the Primary School in which I work. By making use of this sampling method I can make observations of this smaller group and then *generalize* the findings back to the parent population. (Ary et al, 2006)(Punch, 2005). If this is possible, the sample group is said to be *representative* of the population. (Bryman, 2001). A representative sample is vital to validate the research being undertaken.

Different types of sampling could be used to select the participants who make up the research group. Probability sampling involves selecting a sample using chance procedures. In this method every member of the population has a chance to be chosen. In Nonprobability sampling a careful selection of the participants is made based on the researcher's judgment. This method is used for convenience and economy. (Ary et al, 2006). This study follows a non-probable sampling method, in that the participants are very carefully selected from a group of students nominated by classroom teachers. The final selection is done by the school SENCO and Principal – as the researcher, I have had no input in the selection.

For this study, the population is typically a group of Primary School students exhibiting behaviour challenges, across the school, often as a result of Special Learning Needs. Taking the age and temperament, as well as other learning and emotional needs into consideration, a group of ten students was selected. This study focusses on Year 5 and 6 students, from across a range of ethnical backgrounds and is not gender specific.

Ethical Considerations

This research deals with young children who may be sensitive about, or even unaware of the challenges they face by having Special Learning Needs. This section will endeavour to anticipate the relevant ethical considerations, discuss the most important issues, as outlined by Punch (2005), and show how they will be addressed.

Worthiness of the project: Finding a solution for the behaviour challenges faced by students with Special Needs, would be helpful globally. The DRUMBEAT program is easy to adjust to all age groups, and no special musical ability is required. Most schools are in possession of a range of percussion instruments, and whilst the djembe is specifically used in this study, any polytonal instrument – even self-made – would be suitable.

Competence boundaries: As and experienced teacher, I have completed several papers dealing with both Special Needs and Music Education during the course of her studies. Close connections with various agencies, including the services of the school counselor, exist and the necessary support is in place, should further assistance be required for this research project. In addition I am a trained DRUMBEAT facilitator, having completed a three day workshop with the Holyoake Foundation.

Informed consent: Consent was gained from the Board of Trustees and the Principal, from the teachers concerned and from the caregivers, as well as assent from the students involved. Students were informed in a child-friendly way, and indicated willingness to take part in the research. During interactions, a trust relationship was developed and context sensitivity maintained. (Sarantakos, 2005).

Questions for both verbal interviews and written questionnaires were carefully formulated to avoid ambiguity. (Scheider, 2005). DRUMBEAT sessions were approached in a fun, non-threatening way, taking the students' age, concentration span and profile into consideration.

Benefits, cost, reciprocity: Participants had exposure to ten weeks of hand-drumming instruction, which is not focused as much on musical skills, as on social interaction skills. Teachers will have the benefit of improved behaviour which will impact on the classroom climate, and on the learning of the individual students involved. Practioners world-wide will welcome an intervention that is easily applied across age and ability. Costs for this research project have been minimal, and included the cost of administration and my indirect costs, such as transport. The infrastructure (djembe drums) were already in place. I am employed as a classroom teacher for four days a week, and as a Specialist Music Teacher on one day a week. This program is run as part of the regular Music Enrichment program of the school, and has required no additional salary reimbursement.

Other ethical issues to consider: There were a few other ethical issues which arose during the course of the research. (Punch, 2005). An obligation existed to protect participants. Situations needed to be avoided which could be construed as misconduct or impropriety. Further considerations were protection of identity, cross-cultural issues, copyright and credibility of the research report. (Israel & Hay, 2006). Above all, the participants in this study needed to be approached with empathy and sensitivity, taking their pre-adolescent development stage into account. Children with Special Learning Needs face many learning and social challenges, and these students needed positive motivation, encouragement and enjoyment to persevere in the study. Fortunately a climate existed in the school were this study took place in which children believed that inclusion in the DRUMBEAT program was a privilege, and being a member of a drum-circle was a much anticipated and sought after activity.

Data collection methods

For this study, a qualitative data collection method is employed, and data will be collected by interviews with teachers, parents, direct observation, and questionnaires before, during and after the program. The study will typically take place over ten weeks. Data will mainly focus on perceived changes in behaviour patterns and in student's ability to self-regulate. (A full description of the actual data collection is described in Chapter 4: Data Collection.)

Data analysis

Data analysis is the process of synthesising and understanding trends indicated by collected data. I have made use of the data to ascertain what "story is told by the data" and "what factors influenced the story". (Ary et al, 2006, p490) To successfully analyse qualitative data, steps taken included preparing data correctly, defining data clearly, creating composed scales and analysing the significance changes. (Schneider, 2005).

Data derived in the form of field notes can be very difficult to sort, examine and interpret. (Ary et al, 2006). This task was approached in a systematic and organized fashion. The method of analysis will be clearly defined and described in order to inspire confidence in the findings of this study. (Punch, 2005).

The process was divided into three key stages, namely familiarization and organization; coding and recoding; and summarizing and interpreting. (Ary et al, 2006)

During the familiarization and organization stage care was taken to carefully sift and sort data and organize it into a form that was ready for analysis. During transcribing, care was taken to include all relevant detail which may have given added meaning. A reflective journal captured my ideas and observations as they occurred (or as soon after the end of classes/conversations as was possible). (Ary et al, 2006).

According to Punch (2005, p199), coding is the process of "putting tags, names or labels against pieces of the data". This was a detailed process, and involved various steps. (Creswell, 2003). The research questions suggested the following categories: Context/setting; perspectives held by the subjects and participants; subjects' understandings (of social norms and interaction strategies); process; methods. The ten questions were re-organized and found to cover the following main challenges exhibited typically by children with special needs:

- Lack of respect to others and property;
- Defiance and rude behaviour;
- Breaching rules of conduct; and
- Lack of self-management skills.

The previously coded categories were summarized by trying to find relationships and links between the data. During this stage answers to the research questions were formulated. I have reflected on the viability of the answers, and whether they can be put forward with confidence. My conclusions have been reached on the basis of the research findings. (Punch, 2005).

Issues of validity and reliability

For this research to be credible, the reported findings need to give a true representation of the data collected. (Punch, 2005)

Validity measures that have been implemented attempt to reflect Cresswell's (2003) strategies. Data has been triangulated, participants (teachers only, in this case) have checked the accuracy of findings, and self-reflection has taken place. The summary includes detailed descriptions of the findings, comparing both positive findings and negative findings or discrepancies.

Conclusion

In conclusion, the methods and approaches used during the research, were specifically chosen to find an answer to the main and subsidiary research questions. (Punch, 2005). In essence, this study is interested in finding a practical solution, in the form of hand-drumming, to be used as an intervention for students with Special Behaviour Needs who exhibit challenging behaviour.

Chapter Four: Data Collection

Introduction

Mills (2003) suggests utilizing the 'three E's' during data collection: experiencing, enquiring and examining. This approach has served as a framework for data collection in the study under discussion. (Ary et al, 2006).

Experiencing: After each session, I recorded data of student's typical responses to triggers that may elicit challenging behaviour and to the lesson. This was done by in-class sharing (discussions), observation, and formal and informal interviews and questionnaires directed to teachers and caregivers. Questionnaires made use of a simple rating scale to indicate the responses to a list of subsidiary research questions, mainly focused on behaviour patterns. (Ary et al, 2006). Observations made during the delivery of the program were kept in a research journal, which helped track changes in attitudes as the program commences.

Enquiring: Interviews have taken place face-to-face, by email or telephonically, individually and in small focus groups. Questions were carefully formulated, avoiding errors such as the use of jargon, ambiguity, bias and questions that are too hard for the participants to understand. (Mills, 2001). Care was also taken to formulate behaviour descriptions in an objective way, so as not to be leading to a specific response.

Examining: Actual improvement in behaviour is not measurable. Data was collected to examine the perceptions of caregivers and teachers, and the students themselves, rather than the actual incidents of challenging behaviour. Although this seems to be rather vague, any practioner would be able to relate what a huge impact improved self-regulation has on every aspect of the school day, and on the child's ability to access learning. By careful discussion and observation, I was able to examine the changes that took place, and discern how much of the change could be related back to DRUMBEAT, and how much of it was due to other factors, such as the building of relationships within the classroom and teacher or caregiver input.

Sources

Data has been collected from a variety of sources, both anecdotal, through interviews and through informal discussions with teachers and caregivers, and of course with the subjects themselves. Questionnaires were sent out to caregivers and teachers before and after the program.

Time frame

Data collection for the focus group of five subjects took place over a period of approximately sixteen weeks across ten sessions. It may be argued that this is a relatively short time in the life of a primary school aged child to expect growth and change to take place, but the time frame has furnished me with ample evidence on which to base my findings. Fortunately I have been in the position to gather additional anecdotal and

observation notes for the past three years, outlining results over at least five groups of DRUMBEAT students, (fifty students), with similar needs and challenges as those in the focus group (five subjects). This data has been valuable to balance out any discrepancies which may have arisen from the specific grouping in the focus group, or the specific time frame, which took place across a school holiday, and with many variables such as delays, school activities and even the weather.

Collection of Data

Questionnaires

Questionnaires were sent out to the parents/caregivers of the five subjects and their teachers before and after the program. While all parents were very conscientious in returning their forms, teachers were not as easy to pin down, due to their already excessive work load. I changed tactic and sent the questionnaires out in digital form, using Google Forms, and was able to get responses in that way. One teacher was available for an interview, but not willing to respond to a written or digital questionnaire, so her responses were collected in person.

Anecdotal Evidence

Additional data has been gleaned from other teachers that work with the students in the focus group, in the rest of the group, or have had students in the past. Valuable anecdotal information was gathered from the management team and also from two past students who are no longer at the school, but decided to pop in for a casual visit to give feedback on their progress.

Observations

During the first seven lessons, notes were taken at the end of each lesson, journaling a short general impression of the student's participation, contributions and general self-management skills. The last three lessons were a time for reflection, consolidation and preparation for the final performance, and no specific notes were gathered after these lessons, however, time was set aside to co-construct a mind map with the students on their thoughts about the benefits of being part of the DRUMBEAT group. (These student reflections were some of the most insightful of all of the data collected!) Other observations took place informally on the playground during duties, during visits to the classrooms and during other ad hoc contacts with the core focus group, and other previous participants of the program.

Interviews

Whilst the initial idea was to interview each of the caregivers face to face, this did not pan out in reality. Parents either worked and were too busy, or were unwilling to expose their children by making visits to the school. (These parents were often called in for meetings about behavioural misdemeanors of their children, and I realised that there was a negative attitude about school visits.) Parents were quite willing to email or be telephonically interviewed, and this was the route I ended up taking. Teachers, on the other hand, were very accommodating and willing to set aside time to discuss their student's progress over the ten week's duration of the DRUMBEAT program. At the beginning of the program students participated in a whole group discussion to share some of the challenges they were facing in class, at home and in the playground. At the

end of week's eight to ten, students were invited to stay after sessions, in groups of two, and could elect to participate in a mind-mapping activity to share their experiences. Five of the focus group of students chose to do this. This proved very successful and was a good, non-invasive way to gather data about their perceptions of their own self-regulation.

The setting

Observational data was collected mainly during sessions in the Music Room, which is sound-proof and away from the rest of the classrooms. This is a safe and happy environment for most students, were they were shielded from some of the activities and interactions that sometimes create their behavioural triggers.

Challenges

The biggest challenge proved to be the lack of consistency in attendance and ability to deliver sessions. On three occasions no reliever was available, and on another a sports event was planned, making DRUMBEAT sessions impossible. There was also a week in which I was off sick and two weeks of school holidays which interrupted the flow of the program. This extended the actual program to sixteen weeks, instead of over an actual time of ten weeks, which could be argued as accounting for the success of the intervention, however the results match up with other groups which have completed the program over exactly ten weeks. The students were reasonably consistent in their attendance, although there were one or two absences during the ten lesson program. One subject took off unexpectedly on an overseas holiday, returning with a very negative attitude.

Other Influencing factors

With children, and especially students that have Special Learning Needs, there are other factors that influence their ability to participate and contribute effectively. The selected DRUMBEAT group consisted of ten students. From this group, the focus group of six was identified, by using the first six students whose parents returned questionnaires. It was a particularly challenging group in that two students had been included with Autism, one with Selective Mutism, two with ADHD and a handful of other behavioural and social problems existed amongst the group.

As all of the group happened to be boys this time, I was not able to ascertain whether gender plays any role in my research, and that may well be a subject for further study.

One of the unexpected factors which wreaked havoc in at least one session was the weather. It is a well-known fact amongst teachers that students are more likely to act out on windy days, and I endured one of the most challenging sessions on such a day. The data gathered on that day is not in line with the progress that is obvious across the other sessions.

There was also the day the bumble-bee flew into the music room, creating a flurry of activity and excitement, loss of focus, and resulting in overturned drums and chairs, and making at least one subject unable to do anything but talk about bumble-bees for the rest of the session, which then had to be terminated.

Recording data

For the purpose of recording data use has been made of field notes recorded over the past three years, and also specific to this research period, extensive records were kept of communications with students, parents and teachers and an online survey application (Google Forms) was used to gather and sort responses in tabular form.

Chapter Five: Data Analysis

Introduction

The specific inquiry in this research project has been threefold:

1. Do the parents/caregivers see a positive change in behaviour?

2. Do the teachers see a change in self-regulation leading to better behaviour?

3. Do the children themselves, think they are acting differently to challenging situations?

The test of validity would be the comparison between the different stakeholder's perceptions of efficacy: What result did parents, teachers, and my own observations and field notes, and the feedback of the students themselves, indicate? No discrepancies were found, and I, as well as all participants and subjects had the same perception, namely that on the whole the drum-circles had had a positive effect on the student's self-regulation.

Parent's / Caregiver's Feedback

Before the program started, parents were asked to comment on their children's behaviour using a questionnaire, and where possible during informal interviews. This was in the middle of Term 2, which was deemed to have been enough time for the classroom teacher's positive influence to have affected any behaviour patterns, where such an influence existed. At the completion of the program, parents were again given the same questionnaire. Where possible parents were contacted again for feedback after the research period; this took the form of telephonic interviews, informal discussions, and emails.

On analysis of the questionnaire data, an improvement in most behavioural areas is indicated. Only one of the parents reported worsened behaviour in some instances. During interviews with the parents, they admitted that their children had been easier to manage at home, but that in general they were still struggling to manage their children in most cases. On the whole, parents did not seem able to separate their own management skills from their children's self-regulation skills. Parents who had discussed the program content with their children, were very positive, and could see that their children had enjoyed being part of the group. Strangely, one of the parents had not taken any interest, and not had any discussion with their child. This is reflected in the perception of the child's general self-regulating skills. One parent was especially admiring about the fact that her child had made some new friends, and constantly referred to and applied at least one of the skills they had learnt regarding sharing their emotions.

The perception of little improvement in some cases could be explained by many factors, including parent's personal circumstances and parenting skills (or possible lack there-of), student's behaviour in the family home and so on.

The following graphs show a comparison of before and after data submitted by parents/caregivers of six subjects, for the main identified areas of comparison.

Key: *1: Never, 2: Seldom, 3: Often, 4: Always*

Before

After

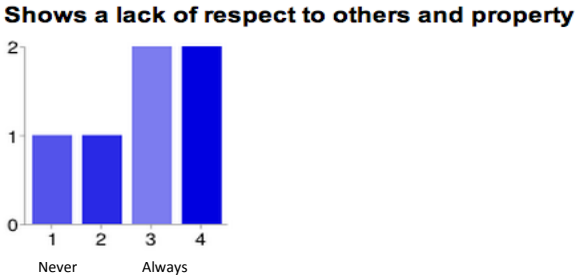


Figure 2

Before the research project three respondents thought that their child was consistently showing a lack of respect to others and property, while two thought it happened often. One respondent seldom saw this behaviour in their child. No-one could say that their child was always respectful.

After the project only two respondents continued to think that their child was constantly disrespectful. One respondent still thought it happened often. One parent reported that their child was seldom disrespectful and another never saw this behaviour in their child anymore

Figure 3

Before the project two parents consistently saw a lack of self-management skills, while four perceived their child to frequently lack self-management skills. No parents felt that it never happened or was seldom happening.

After the project only one parent still reported a total lack of self-management, three still saw this behaviour frequently, and two said that they now seldom saw a lack of self-management skills.

Figure 4

Initially two respondents felt that their child consistently broke the rules, and four saw it happen frequently. No-one could say that it happened seldom or never.

By the end of the research project two parents still felt that the rules were constantly being broken, three felt that it was happening frequently, and one parent perceived this to have changed to a seldom occurence.

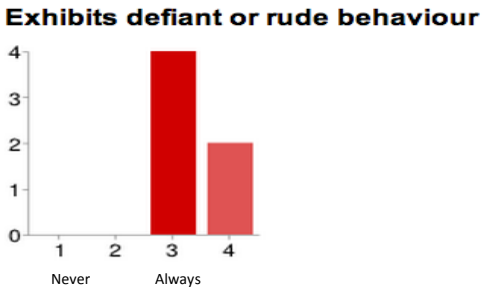


Figure 5

At the beginning of the project three parents thought their child was consistently rude or defiant, while three thought it was a frequent occurrence. None reported polite or compliant behaviour.

Subsequent to the project parents of two children continued to report constant defiance and rude behaviour. Four parents still saw this behaviour frequently, while none who could report polite behaviour.

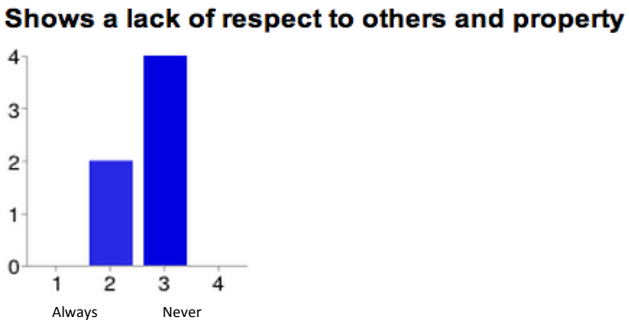
Teacher's Feedback

The teachers were very positive about the program and all reported improved behaviour in the classroom. Where parents were sometimes not as in-tune with the student's improved self-regulation, the teachers, who are accustomed to formative and ongoing assessment and reflection regarding individual children, were freer in their acknowledgement of self-control shown in their pupils, both before and after the intervention. One student's behaviour seems to have worsened, and on further investigation it was found that he had missed three of the ten sessions due to a prolonged overseas trip. This may have changed the outcome of the effect of the intervention on his self-regulation skills.

The following graphs show a comparison of before and after data submitted by teachers of the same six subjects, for the four main areas of comparison. (Take note that teachers were able to respond online, using Google Forms, and therefore the scale was flipped digitally: 1= Always and 4 = Never)

Key: *1: Always, 2: Often, 3: Seldom, 4: Never*

Before



After

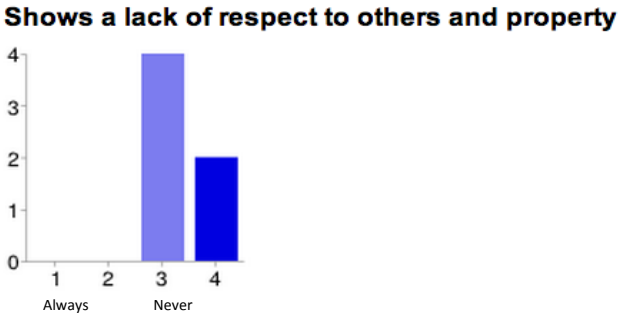


Figure 6

Initially teachers reported that two of the students frequently showed a lack of respect to others and property, while the other four seldom exhibited that kind of behaviour.

After the program four students seldom showed disrespect, and two showed no instances of rudeness or lack of respect.

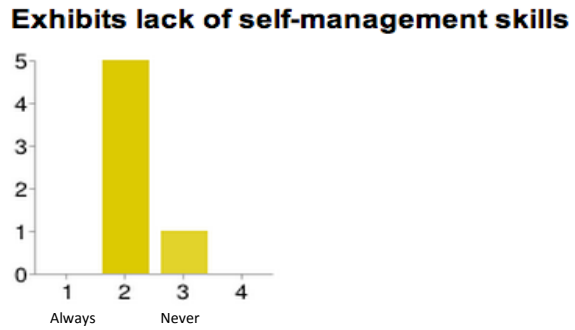


Figure 7

Before the program teachers felt that five of the subjects frequently displayed lack of self-management skills, while one seldom had problems with self-regulation.

Figure 8

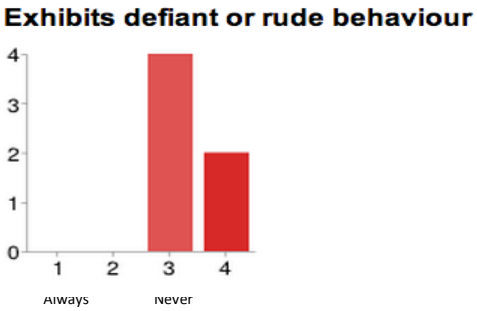
At the start of the program, three subjects were perceived by teachers to break rules often, and three of them not so often. There were no extremes in this case.

Interestingly, while five students hardly ever showed a lack of self-management after the research project, one student's behaviour was seen to have become constantly lacking in self-regulation.

By the end of the project one student was consistently breaching codes of conduct, four were not doing so frequently, and one was never in trouble anymore.

Figure 9

When the program started, three of the subjects were often rude and defiant, and three exhibited defiant and rude behaviour at times.



After ten weeks of DRUMBEAT, teachers felt that four of the students hardly ever showed defiant or rude behaviour, and two had become consistently polite and compliant.

As noted previously, it was easier to get teachers to sit down to an interview regarding their students' progress. Further remarks made by teachers showed that one of the subjects was "better at managing himself when he doesn't get his own way. It is easier to talk to him and to get him to calmly explain what was wrong and what he wanted to be sorted, or should have done to change the situation." All of the teachers remarked that the subjects looked forward to the weekly drum circle and benefitted from the structure and routine of it. "He thought it was really fun, and he loved getting ready for the performance and the thought of showcasing his new skills to the rest of the school". Teachers also reported that these students enjoyed – sometimes for the first time – being part of an "exclusive team". One teacher, who

happened to have two subjects in the group, remarked that they "felt special to have been chosen, especially as I made a big thing of it being a real privilege."

Student's Feedback

Initially students were very wary of being part of a group, unsure of the participation required, and uneasy about being required to contribute to discussions. At the first lesson, data was collected by a variety of means, amongst other a drumming rhythm game, where students are required to say one a phrase that reflects their feelings at that moment. These are some of the responses exactly as they were recorded:

- "very shy"
- "don't fit in"
- "always fighting"
- "hard to make friends"
- "get frustrated easily"
- "act first, think later"
- "teacher growls at me every day"

Another game, called 'rumble if....' requires drummers to do a series of rapid DRUMBEATs when they agree with a provocative comment being made. Comments are initially made by drummers in turn, and then gradually change to the facilitator calling out every second time. Initially comments range from 'rumble if..... you had weatbix for breakfast' to deliberate information gathering comments like 'rumble if..... you get angry quickly'; '..... you like to laugh'; 'you laugh at the wrong time, and get into trouble'; '.....you feel like running away when things go wrong' and so on. The majority of responses recorded showed that the subject group were struggling with skills that required self-regulation. They struggled with persisting in challenging activities and they could not verbalise disagreement in a positive way. Many of these students were not able to express their feelings verbally, and some admitted to using violence or temper tantrums to control their surroundings.

A similar session at the end of the program showed a dramatic improvement in student's perceptions of their self-regulating skills. In response to the question: "What do you think you learned?" these responses were recorded:

- "How to control my anger."
- "I'm more relaxed."
- "I feel better about myself."
- "I can focus better."
- "It's easier to make friends."
- "Even when people are different, they're not different."

After the ten weeks, students were asked to choose a buddy from the group and take part in a mind-mapping exercise. Each new group just added to what the previous pair had already noted down. The students came up with some very insightful comments, all of which showed a perception that they had made progress in their self-regulation skills.

Interestingly, one of the subjects who has continued to be in trouble in the classroom and playground, had some of the most positive comments to make, and showed real insight into his own understanding of his ability to self-regulate. Hopefully this is an indication that, as time passes by he will choose to apply these skills more often.

The original mind map became extensive and cumbersome, therefore some of the main summative responses have been grouped and recorded here.

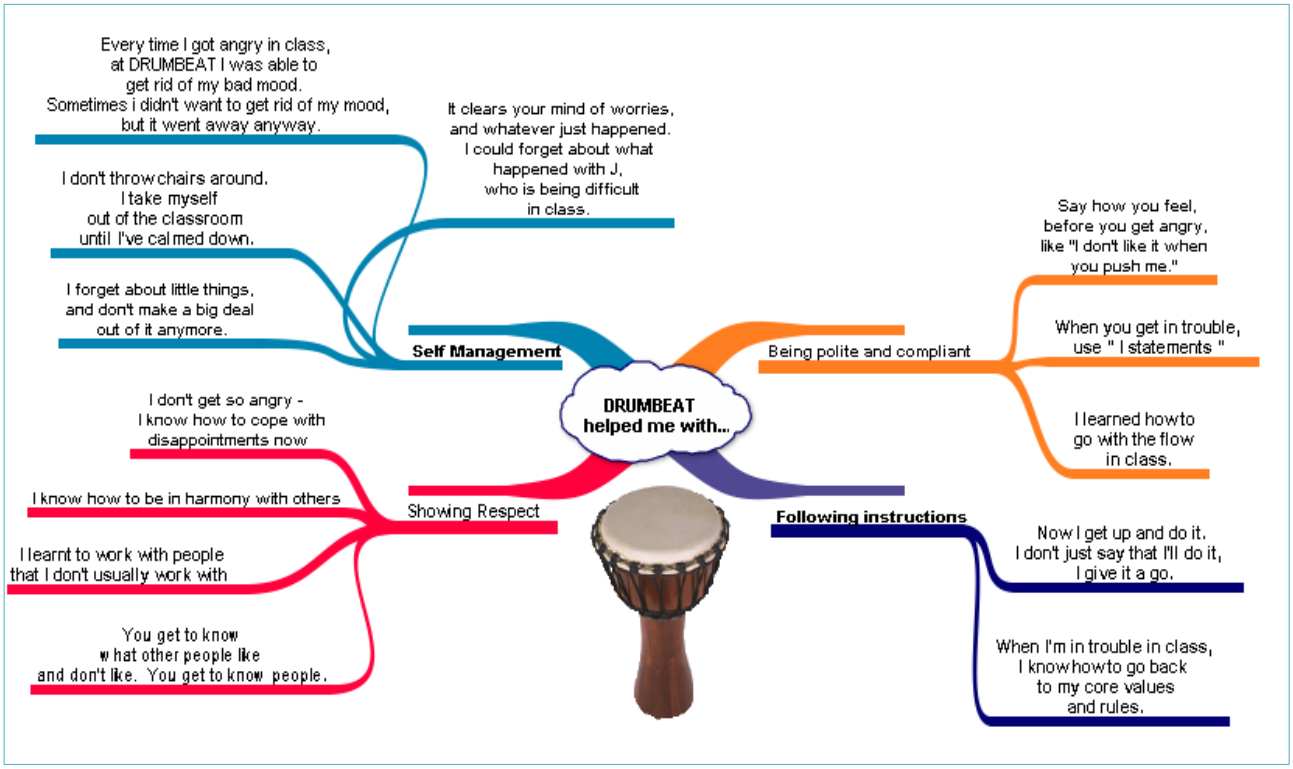


Figure 10: Mind-map of students' feedback.

The student's own reflections were surprisingly sophisticated and they clearly saw the DRUMBEAT class as a safe haven, and valued the life skills they had learned.

Researcher's Observations and Field Notes

For the first seven formal lessons, cryptic field notes were made, mainly focusing on participation and contribution, as well as self-regulation skills of the six focus subjects. The last three lessons were used for reflection and to prepare for a performance in front of the school, scheduled for Term 4. These field notes have been included here, as they give an interesting angle on the students' progress, and on some of the

factors that may have influenced the outcome of this research at times. In order to preserve the integrity of the data, the notes have been left as they were first recorded, with editing done only for the purpose of clarity.

Student 1 Profile: *Severe anger issues and lack of social skills.*

Week	Observations
1	Very skeptical, didn't want to be part of group
2	More open, took part a bit, shared ideas
3	10 min late, due to initial refusal to attend. Tried to storm out. After a bit of coaxing stayed and participated happily.
4	Came a bit late after a bit of resistance, but so much happier. Said that he enjoyed being here, making new friends.
5	Tantrum about attending first. Settled down somewhat.
6	Arrived first. Very supportive and kind to other group members. Open and communicative towards me too. Plenty of shy smiles and positive attitude.
7	Arrived first to set up today. An absolute joy today - happy to participate and communicative and open towards other group members. Had some great ideas to contribute.
8 - 10	Contributed in mind-map and discussion with ease and enjoyment. Obvious pride in his progress.

Student 2 Profile: *Autistic*

Week	Observations
1	Very reticent, wouldn't take part. 'I don't fit in'.
2	Still quite reluctant to take part. Wary observation of others. Experimented with a few strokes on the drum.
3	Taking part with enthusiasm and was 'winner' of the sustained drumming part. Tried to encourage another student by patting him on the head.
4	Great today, counting out the beats and working really well and in synch with all the others.
5	Good participation. Was a bit thrown by not sitting in the same spot as usual, but quickly adjusted to the situation. Was able to follow all rhythms with enthusiasm.
6	Great. Tries really hard. Tries to motivate others. Got a bit fixated on a bumble-bee flying into the class.***
7	Very enthusiastic and happy to participate. Well self-regulated. Not too much shouting out. Only needed to be reminded once to stop drumming at inappropriate times.

8 - 10	Had some very insightful contributions. Obviously feels good about his participation.

Student 3 Profile: *ADD, Asperger's Syndrome, Dyslexia, Developmental and Physical impairments.*

Week	Observations
1	Over-eager, lacks focus.
2	Starting to wait for turn. More able to focus.
3	Absent
4	Struggling to keep up, absent-minded, didn't yell out as much and became more focussed towards the end of the lesson.
5	Came late, easily side-tracked, but with support managed to follow rhythms correctly. No yelling out at all.
6	Good today. Tried hard to stay on task, but more off-task than usual.***
7	Well on task and participated with enthusiasm. Not much shouting out and was able to focus somewhat more than usual.
8 - 10	Not really able to cognitise his progress well, but smiled a lot and indicated it had been a positive experience.

Student 4 Profile: *Lack of social and academic development – previously 'unschooled'. Poor attendance record.*

Week	Observations
1	Eager to learn new skills, but lacks focus. Very shy and seems dubious about other participant's good intentions.
2	A bit more in harmony and keeping to the beat, and can share some ideas. Was able to talk to some other peers.
3	Did well today. Content and eager to participate.
4	Loves it, and won't go at end of lesson. Keeping up really well. Participating and contributing in discussions. Drumming well and in beat.
5	Very enthusiastic, stayed on-task, positive attitude. Helped pack away at end.
6	Absent
7	Smiled through entire lesson and kept up with others really well. Discussing, joking and thoroughly enjoying himself.

8 - 10	Able to discuss how much he had enjoyed participating. Confidence has developed, and he now looks forward to coming to school.

Student 5 Profile: *ODD (Oppositional Defiance Disorder.) Unexpectedly went overseas during Week 4 – 6.*

Week	Observations
1	Quiet, angry, warily watching everyone, not confident. No interest in participating.
2	More confident, and showed enjoyment, although he was careful to try and stay grumpy
3	Confident and encouraging towards others. No sign of negative attitude today. Very rhythmical, and could become a great drummer.
4	Absent
5	Absent
6	Absent
7	Not interested, looked sulky and no smiles even when jokes were made. Couldn't lift him out of the mood at all.
8 - 10	Refused to contribute to discussions.

Student 6 Profile: *Autism*.

Week	Observations
1	Quite rude about being here, and clearly not wanting to participate.
2	Settled in a bit more, and played quite well. No interaction with others.
3	Loved being here, and struggled to get him to leave at end of lesson.
4	A lot of positive interaction today. Drumming very well. Got very side-tracked by a bumble-bee that flew in and almost disrupted the class, but settled down once we had set it free.
5	Off task often. Chose to do own rhythm during 'heartbeat' song, but his rhythm fitted in well, so we used that to illustrate a point.
6	Very grumpy, non-responsive. Refused to participate. Non-verbal.***
7	Grumpy and non-responsive to start off with, but gradually started to participate, and by end was drumming with everyone else to the beat. I got a shy "Goodbye" and a story about his cat when he left.
8 - 10	Wanted one on one time to reflect on his progress. Didn't contribute many good ideas, but he

has clearly enjoyed the interaction with others and the drumming, and would have liked to continue coming.

**** Very windy and stormy today. Many of the special needs children seem to be out of sorts this week. These students are obviously also affected by the weather.*

In hindsight, it is clear that the ten week period a very short time for this kind of intervention to take place. In future research, it would be interesting to see the impact of inclusion in a drumming circle on these subjects over a longer period, or even repeated at intervals over several years.

Delivery of lessons to this specific group was challenging in that every single one of the main group of ten students exhibited poorly regulated behaviour as a result of special learning needs. Normally such a group consists of both genders, and at least a section of the participants are included for reasons other than behavioural challenges. As mentioned before, the participants were chosen by the school SENCO and the Management Team, so as the researcher, I had no control over the grouping of the participants. The results are no different from other previous groups, however, and the data has not been influenced in any way by the composition of this group.

The dramatic positive differences in attitude from Week One to Week Eight are very gratifying, however, and clearly indicate that the DRUMBEAT program is very successful in teaching children with special learning needs to self-regulate.

Chapter Six: Summary

When embarking on this research project, I full expected my data to reflect significant positive changes in the behaviour of subjects over the course of the ten-week program. Findings have not been disappointing. Whilst the unexpected and sometimes inconsistent daily life of a primary school, and the age and demeanor of the subjects at times made the collection of data for the focus group challenging, the overall impression from my own observations, discussions with the subjects, anecdotal recounts and questionnaires strongly indicate the worthiness and usefulness of DRUMBEAT as a program to support the self-regulation of behaviour in children with socio-behavioural challenges.

From analysis of the data it is abundantly clear that inclusion in a hand-drumming circle, can and will have a significant effect on the self-regulation of children with special learning needs, under certain conditions. The improvements shown are especially encouraging, especially as the time frame (across 16 weeks) is relatively short for the behaviour of a primary school aged child to respond to behaviour interventions in such a consistent way.

The specific inquiry in this research project has been threefold:

1. Do the parents/caregivers see a positive change in their children's behaviour?

   On analysis, the evidence clearly indicates that the parents have perceived a change in at least one or two facets of their child's behaviour. Even though the results were not mind-blowing, even subtle changes are extremely encouraging over such a short research period. Parents of previous pupils often drop in to have a word, and are full of praise for the long term effects that the program has had on their children.

2. Do the teachers see a change in self-regulation leading to better behaviour?

   Teachers of this group of students, the specific focus group, and teachers of previous groups of students are unanimous in their belief that students benefit greatly from inclusion in the DRUMBEAT program. The list of nominations grows each term, and there is a general clamor to get students who exhibit challenging behaviour on the program. The need far outweighs the opportunities available to work with students who need the intervention at this stage. The Principal and BOT have supported the program for three years now, and have continuously funded release time for me to continue with my work, which indicates a strong measure of support in the success of the program.

3. Do the children themselves, think they are acting differently to challenging situations?

   The most encouraging feedback was from the students themselves, both past and present. Students are able to articulate the social skills they have learnt and can apply them in different settings. Some of the lessons are remembered long after their inclusion in DRUMBEAT has ended, and they return to me after years, and still recall the impact of the program on their self-regulation. The focus group was confident in their perception that they were more able to cope with challenges that previous sparked un-regulated behaviour.

In DRUMBEAT, whenever you get lost or confused while playing a rhythm, you are taught to listen for the next Bass note, which is quite predictive, and then join in again. We use this lesson to illustrate an important life skill: when you're in trouble, always go back to your norms and values (the Bass note) – and you can't go wrong. I recently walked past one of my previous DRUMBEAT pupils: a lively, freckle-faced, sport-crazy boy who struggles with Attention Deficit Disorder. He was being confronted by the Deputy Principal for making poor choices in the classroom and being generally disruptive. "What *should* you have done, Elias?" he was being asked in a stern tone. The boy paused, looking quite remorseful, made eye contact with me for a split second, and then I heard him clearly say: "I'm a DRUMBEAT kid, Mr B, I should have listened for the Bass note."

Appendix A

THE UNIVERSITY OF AUCKLAND
FACULTY OF EDUCATION
Te Kura Akoranga o Tamaki Makaurau
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Gate 3, 74 Epsom Ave, Epsom, Auckland, New Zealand
Telephone 64 9 623 8899, Fascimile 64 9 623 8898
www.education.auckland.ac.nz
The University of Auckland
Private Bag 92601, Symonds Street
Auckland 1150, New Zealand

Participant Information Sheet: Principal

Please retain this sheet for your information

Project Title: Supporting children with social behavioral needs through hand-drumming.

Dear

I am now seeking your permission to conduct a research investigation into how the DRUMBEAT program will support behaviour in the classroom and at home. This research will not affect any student's classroom performance in any way, nor will it affect the outcome of any assessments relating to his/her learning areas.

I am conducting this research towards attaining a Masters Degree in Education. The research study is aimed at evaluating the effect of the DRUMBEAT program on students' behaviour in class, and at home, and how his/her teachers and caregivers think it is helping the student.

All confidential data will be kept securely for six years, in the office of the Principal Researcher, at the University of Auckland, and then destroyed. All questionnaires will remain anonymous. Students can opt out of inclusion at any time.

Some discussions during sessions may touch on sensitive issues, and your child will have the choice of participating in these discussions. Other group members are not allowed to discuss student's personal stories with other people outside the group. We have a strict code of confidentiality, and I will explain that further at the beginning of each session. Mrs Lyle Christie, our school counselor, has made herself available, should any psychological issues arise as a result of this research.

As part of my data collection, I will be doing a series of interviews, collect information from caregivers and teachers via questionnaires, and do direct observations. Observations collected during these sessions will be included as anecdotal data in the research paper. Before initial DRUMBEAT sessions, after five sessions, and at the end of the ten weeks, I would like to have a short interview with all participants, their caregivers and their teachers to talk about the benefits of DRUMBEAT, and evaluate the effect of participation. All activities will be carefully scheduled so that they do not disrupt normal classroom or school activities. Each caregiver and teacher will also be required to complete a set of three questionnaires just after their interviews. These questionnaires will remain anonymous.

Every effort will be made to keep all data confidential, and neither the students' names, caregivers' names or the school's name will be mentioned in the final report.

The school will receive a copy of the final report at the culmination of the investigation.

Caregivers will be asked to sign a Participant Assent Form indicating the verbal consent of each student.

If you have any questions regarding this project you may contact:

Researcher:	Supervisor:
Raenette Taljaard, Elm Park School, 46 Gossamer Drive, Pakuranga Heights. +64 9 577 0070 ext 819. Email: raenette@elmpark.school.nz	Dr Trevor Thwaites, Principal Lecturer Music Education, School of Curriculum and Pedagogy, University of Auckland. +64 9 623 8899 ext 48702. Email: t.thwaites@auckland.ac.nz

Yours sincerely,

Raenette Taljaard
MUSIC SPECIALIST TEACHER: ELM PARK SCHOOL

For any queries regarding ethical concerns you may contact the Chair, The University of Auckland Human Participants Ethics Committee, The University of Auckland, Research Office, Private Bag 92019, Auckland 1142. Telephone 09 373-7599 extn. 87830/83761. Email: humanethics@auckland.ac.nz

APPROVED BY THE UAHPEC ETHICS COMMITTEE on 14 May 2013 for a period of three years. Reference: 9442.

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Auckland 1150, New Zealand

Participant Information Sheet: Caregivers

Please retain this sheet for your information

Project Title: Supporting children with social behavioral needs through hand- drumming.

Dear

I am conducting this research towards attaining a Masters Degree in Education. The research study is aimed at evaluating the effect of the DRUMBEAT program on students' behaviour in class, and at home, and how his/her teachers and caregivers think it is helping the student.

All confidential data will be kept securely for six years, in the office of the Principal Researcher, at the University of Auckland, and then destroyed. I am a classroom teacher at Elm Park School, and also the Music Specialist Teacher, responsible for Music Enrichment programs on Fridays in the school.

You have already been informed by the school that your child is involved in the DRUMBEAT program with me.

I am now seeking your permission to conduct a research investigation into how the DRUMBEAT program will support behaviour in the classroom and at home. This research will not affect your child's classroom performance in any way, nor will it affect the outcome of any assessments relating to his/her learning areas.

I am doing a research study aimed at evaluating the effect of the DRUMBEAT program on students' behaviour in class, and at home, and how his/her teachers and caregivers think it is helping the student.

All confidential data will be kept for five years, locked in the storage space at Elm Park School, and then destroyed. All questionnaires will remain anonymous. Your child can opt out of inclusion at any time.

Some discussions during sessions may touch on sensitive issues, and your child will have the choice of participating in these discussions. Given the age group we are working with, should the students start to divulge information of an inappropriate nature, we will steer it in a more appropriate direction, as in any other classroom. We have a code of confidentiality, which I will reinforce at the beginning of each session. If any of these topics upset your child, he/she will be able to have time with Mrs Lyle Christie, our school counselor, to talk through their concerns.

As part of my data collection, I will be doing a series of interviews, collect information via questionnaires, and do direct observations. Observations collected during these sessions will be included as anecdotal data in the research paper. Before initial DRUMBEAT sessions, after five sessions, and at the end of the ten weeks, I would like to have a short interview with all participants, their caregivers and their teachers to talk about the benefits of DRUMBEAT, and evaluate the effect of participation. You, and your child's teacher will also be required to complete a set of three questionnaires after your interviews. These questionnaires will remain anonymous, and you may send them to me later.

Every effort will be made to keep all data confidential, and neither your name, your child's name or the school's name will be mentioned in the final report.

The school will receive a copy of the final report at the culmination of the investigation.

Please discuss your child's involvement with him/her and indicate his/her verbal consent by signing the attached Participant Assent Form.

If you have any questions regarding this project you may contact:

Researcher:	Supervisor:
Raenette Taljaard, Elm Park School, 46 Gossamer Drive, Pakuranga Heights. +64 9 577 0070 ext 819. Email: raenette@elmpark.school.nz	Dr Trevor Thwaites, Principal Lecturer Music Education, School of Curriculum and Pedagogy, University of Auckland. +64 9 623 8899 ext 48702. Email: t.thwaites@auckland.ac.nz

Yours sincerely,

Raenette Taljaard
MUSIC SPECIALIST TEACHER: ELM PARK SCHOOL

For any queries regarding ethical concerns you may contact the Chair, The University of Auckland Human Participants Ethics Committee, The University of Auckland, Research Office, Private Bag 92019, Auckland 1142. Telephone 09 373-7599 extn. 87830/83761. Email: humanethics@auckland.ac.nz
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Participant Information Sheet: Teachers

Please retain this sheet for your information

Project Title: Supporting children with social behavioral needs through hand-drumming.

Dear

I am seeking your permission to conduct a research investigation into how the DRUMBEAT program will support behaviour in the classroom and at home.

I am conducting this research towards attaining a Masters Degree in Education. The research study is aimed at evaluating the effect of the DRUMBEAT program on students' behaviour in class, and at home, and how his/her teachers and caregivers think it is helping the student. This research will not affect any student's classroom performance in any way, nor will it affect the outcome of any assessments relating to his/her learning areas.

All confidential data will be kept securely for six years, in the office of the Principal Researcher, at the University of Auckland, and then destroyed. All questionnaires will remain anonymous. Students can opt out of inclusion at any time.

Some discussions during sessions may touch on sensitive issues, and your student will have the choice of participating in these discussions. Other group members are not allowed to discuss student's personal stories with other people outside the group. We have a strict code of confidentiality, and I will explain that further at the beginning of each session. Mrs Lyle Christie, our school counselor, has made herself available, should any psychological issues arise as a result of this research.

As part of my data collection, I will be doing a series of interviews, collect information from caregivers and teachers via questionnaires, and do direct observations. Observations collected during these sessions will be included as anecdotal data in the research paper. Before initial DRUMBEAT sessions, after five sessions, and at the end of the ten weeks, I would like to have a short interview with all participants, their caregivers and their teachers to talk about the benefits of DRUMBEAT, and evaluate the effect of participation. All activities will be carefully scheduled so that they do not disrupt normal classroom or school activities. Each caregiver and teacher will also be required to complete a set of three questionnaires just after their interviews. These questionnaires will remain anonymous.

Every effort will be made to keep all data confidential, and neither your name, the students' names, caregivers' names or the school's name will be mentioned in the final report.

The school will receive a copy of the final report at the culmination of the investigation.

Caregivers will be asked to sign a Participant Assent Form indicating the verbal consent of each student.

If you have any questions regarding this project you may contact:

Researcher: Raenette Taljaard, Elm Park School, 46 Gossamer Drive, Pakuranga Heights. +64 9 577 0070 ext 819. Email: raenette@elmpark.school.nz	Supervisor: Dr Trevor Thwaites, Principal Lecturer Music Education, School of Curriculum and Pedagogy, University of Auckland. +64 9 623 8899 ext 48702. Email: t.thwaites@auckland.ac.nz

Yours sincerely,

Raenette Taljaard
MUSIC SPECIALIST TEACHER: ELM PARK SCHOOL

For any queries regarding ethical concerns you may contact the Chair, The University of Auckland Human Participants Ethics Committee, The University of Auckland, Research Office, Private Bag 92019, Auckland 1142. Telephone 09 373-7599 extn. 87830/83761. Email: humanethics@auckland.ac.nz

APPROVED BY THE UAHPEC ETHICS COMMITTEE on 14 May 2013 for a period of three years. Reference: 9442.

THE UNIVERSITY OF AUCKLAND
FACULTY OF EDUCATION
Te Kura Akoranga o Tamaki Makaurau
INCORPORATING THE AUCKLAND COLLEGE OF EDUCATION

Epsom Campus
Gate 3, 74 Epsom Ave, Epsom, Auckland, New Zealand
Telephone 64 9 623 8899, Fascimile 64 9 623 8898
www.education.auckland.ac.nz
The University of Auckland
Private Bag 92601, Symonds Street
Auckland 1150, New Zealand

Participant Information Sheet: Students

Please keep this sheet for your information.

Project Title: Supporting children with social behavioural needs through hand-drumming.

Dear

I would like you to help me with an Inquiry project that I am doing for the University of Auckland this year. I am trying to find out how DRUMBEAT will help you with your behaviour in class, and at home. I also want to see how your teachers and caregivers think it is helping you. Being part of the DRUMBEAT group won't affect your work in class at all.

All the information I collect will be stored here at school for five years. All questionnaires will remain anonymous, so your name is not on it. You can choose to quit anytime you want. Your name will not appear on the final report, and except for your caregivers and teacher, no-one else will know that you are part of this project.

Sometimes we will be talking about sensitive issues, and you will have the choice of joining in during these discussions. The rest of the group are not allowed to discuss your stories with other people outside the group.

If you need to, Mrs Lyle Christie, our school counselor, will help you with any serious personal issues that may be bothering you, and that are affecting your behaviour. I will remind you all of this at the beginning of each session.

As part of my project I will be asking your caregivers and teachers lots of questions, and make notes of incidents regarding your behaviour, and how DRUMBEAT is helping you. This will mosting happen before, in the middle and at the end of our program of ten weeks.

I have also written to your caregivers explaining my Inquiry project, and they could explain anything you don't understand.

Or you could ask me, or my Supervisor. Here are our contact details:

Researcher:	Supervisor:
Raenette Taljaard, Elm Park School, 46 Gossamer Drive, Pakuranga Heights. +64 9 577 0070 ext 819. Email: raenette@elmpark.school.nz	Dr Trevor Thwaites, Principal Lecturer Music Education, School of Curriculum and Pedagogy, University of Auckland. +64 9 623 8899 ext 48702. Email: t.thwaites@auckland.ac.nz

Yours sincerely,

Raenette Taljaard
MUSIC SPECIALIST TEACHER: ELM PARK SCHOOL

For any queries regarding ethical concerns you may contact the Chair, The University of Auckland Human Participants Ethics Committee, The University of Auckland, Research Office, Private Bag 92019, Auckland 1142. Telephone 09 373-7599 extn. 87830/83761. Email: humanethics@auckland.ac.nz

APPROVED BY THE UNIVERSITY OF AUCKLAND HUMAN PARTICIPANTS ETHICS COMMITTEE ON …… for (3) years, Reference Number …../……

THE UNIVERSITY OF AUCKLAND
FACULTY OF EDUCATION
Te Kura Akoranga o Tamaki Makaurau
INCORPORATING THE AUCKLAND COLLEGE OF EDUCATION

CONSENT TO PARTICIPATE IN RESEARCH
Teachers
(This Consent Form will be held for a period of six years)

Project Title: Supporting children with social behavioural needs through hand-drumming.

Researcher: Anita Raenette Taljaard

I have been given and have understood an explanation of this research project. I have had an opportunity to ask questions and have them answered.

I consent to participate in the study with the understanding that my participation is entirely voluntary and I can withdraw personally at any stage and have information I have contributed withdrawn up until the point of data analysis approximately 1 October 2013).

I understand that all documentation will be held securely in the office of the Principal Research at the University of Auckland for a period of six years.

I agree to:

- Take part in individual interviews before, during and after the ten-week programme.
- Complete a questionnaire for each participant in my class before, and after the ten-week programme.

I understand that my name will not be used in any written or oral presentation. I understand that my privacy will be respected. I understand that the findings will be used for publication and conference presentations.

I agree to participate in the research.

Signed: _____

Name: _____

Date: _____

APPROVED BY THE UAHPEC ETHICS COMMITTEE on 14 May 2013 for a period of three years. Reference: 9442.

THE UNIVERSITY OF AUCKLAND
FACULTY OF EDUCATION
Te Kura Akoranga o Tamaki Makaurau
INCORPORATING THE AUCKLAND COLLEGE OF EDUCATION

ASSENT TO PARTICIPATE IN RESEARCH
Students
(This Consent Form will be held for a period of six years)

Project Title: Supporting children with social behavioural needs through hand-drumming.

Researcher: Anita Raenette Taljaard

I have been given and have understood an explanation of this research project. I have had an opportunity to ask questions and have them answered.

I give consent for my child to participate in the research project with the understanding that his/her participation is entirely voluntary and can be withdrawn personally at any stage.

I understand that all documentation will be held securely in the office of the Principal Researcher at the University of Auckland for a period of six years.

I understand that my child's name will not be used in any written or oral presentation. I understand that his/her privacy will be respected. I understand that the findings will be used for publication and conference presentations.

I agree to allow my child to participate in the research.

Signed: _____

Name: _____

Date: _____

APPROVED BY THE UAHPEC ETHICS COMMITTEE on 14 May 2013 for a period of three years. Reference: 9442.

Appendix G

THE UNIVERSITY OF AUCKLAND
FACULTY OF EDUCATION
Te Kura Akoranga o Tamaki Makaurau
INCORPORATING THE AUCKLAND COLLEGE OF EDUCATION

CONSENT TO PARTICIPATE IN RESEARCH
Caregivers
(This Consent Form will be held for a period of six years)

Project Title: Supporting children with social behavioural needs through hand-drumming.

Researcher: Anita Raenette Taljaard

I have been given and have understood an explanation of this research project. I have had an opportunity to ask questions and have them answered.

I consent to participate in the study with the understanding that my participation is entirely voluntary and my child or I can withdraw personally at any stage and have information either of us has contributed withdrawn up until the point of data analysis approximately 1 October 2013).

I understand that all documentation will be held securely in the office of the Principal Researcher at the University of Auckland for a period of six years.

I agree to:

- Take part in individual interviews before, during and after the ten-week programme;
- Allow my child to take part in group and individual interviews before, during and after the ten-week programme;
- Complete a questionnaire before, and after the ten-week programme.

I understand that my name, the school's name, or my child's name will not be used in any written or oral presentation. I understand that my privacy and my child's privacy will be respected. I understand that the findings will be used for publication and conference presentations.

I agree to participate in the research.

Signed: _____

Name: _____

Date: _____

APPROVED BY THE UAHPEC ETHICS COMMITTEE on 14 May 2013 for a period of three years. Reference: 9442.

THE UNIVERSITY OF AUCKLAND
FACULTY OF EDUCATION
Te Kura Akoranga o Tamaki Makaurau
INCORPORATING THE AUCKLAND COLLEGE OF EDUCATION

CONSENT TO PARTICIPATE IN RESEARCH
Principal and Board of Trustees
(This Consent Form will be held for a period of six years)

Project Title: Supporting children with social behavioural needs through hand-drumming.

Researcher: Anita Raenette Taljaard

We have been given and have understood an explanation of this research project. I have had an opportunity to ask questions and have them answered.

We consent to the study with the understanding that participation is entirely voluntary and participants can withdraw personally at any stage and have information they have contributed withdrawn up until the point of data analysis (approximately 1 October 2013).

We understand that all documentation will be held securely in the office of the Principal Research at the University of Auckland for a period of six years.

We, the Principal and Board of Trustees, agree to:

- Allow individual interviews before, during and after the ten-week programme in the Music Room, Elm Park School.
- Allow to the distribution of questionnaire before, and after the ten-week programme, to teachers and caregivers.

We understand that no names will be used in any written or oral presentation. I understand that all participants' and the school's privacy will be respected. I understand that the findings will be used for publication and conference presentations.

I agree to Elm Park School's participation in the research.

Signed: _____

Name: _____
(Principal, Elm Park School)

Date: _____

APPROVED BY THE UAHPEC ETHICS COMMITTEE on 14 May 2013 for a period of three years. Reference: 9442.

DRUMBEAT
BUILDING RESILIENCE THROUGH RHYTHM

Dear Caregiver,

In order for us to evaluate the true benefits of this programme, you will be required to fill in this questionnaire, before, and after the project. Please do not name or identify your child in any way, and return the questionnaire to the school office in the envelope provided or in an envelope on which 'DRUMBEAT : confidential' has been clearly marked on the outside.

My child exhibits the following challenging behaviour:

1.	Shows a lack of respect to others and property.	Always 3	Often 2	Sometimes 1	Never 0
2.	Gives up easily when faced with challenges.	Always 3	Often 2	Sometimes 1	Never 0
3.	Exhibits a negative or low self-image.	Always 3	Often 2	Sometimes 1	Never 0
4.	Breaks rules or breaches codes of conduct in class or playground.	Always 3	Often 2	Sometimes 1	Never 0
5.	Struggles to become an integrated team member.	Always 3	Often 2	Sometimes 1	Never 0
6.	Is not able to work independently within set guidelines.	Always 3	Often 2	Sometimes 1	Never 0
7.	Cannot verbalise disagreement in a positive way.	Always 3	Often 2	Sometimes 1	Never 0
8.	Cannot contain angry feelings when others in the group do better than him/her.	Always 3	Often 2	Sometimes 1	Never 0
9.	Exhibits defiant or rude behaviour.	Always 3	Often 2	Sometimes 1	Never 0
10.	Is unable to express his/her feelings in a positive way.	Always 3	Often 2	Sometimes 1	Never 0
11.	Exhibits a lack of self-management skills.	Always 3	Often 2	Sometimes 1	Never 0
12.	Has little or no empathy with others.	Always 3	Often 2	Sometimes 1	Never 0

Additional Comments:

Appendix J

DRUMBEAT
BUILDING RESILIENCE THROUGH RHYTHM

Dear Teacher,

In order for us to evaluate the true benefits of this program, you will be required to fill in this questionnaire, before, and after the project. Please do not name or identify your student in any way, and return the questionnaire to the school office in the envelope provided or in an envelope on which 'DRUMBEAT : confidential' has been clearly marked on the outside.

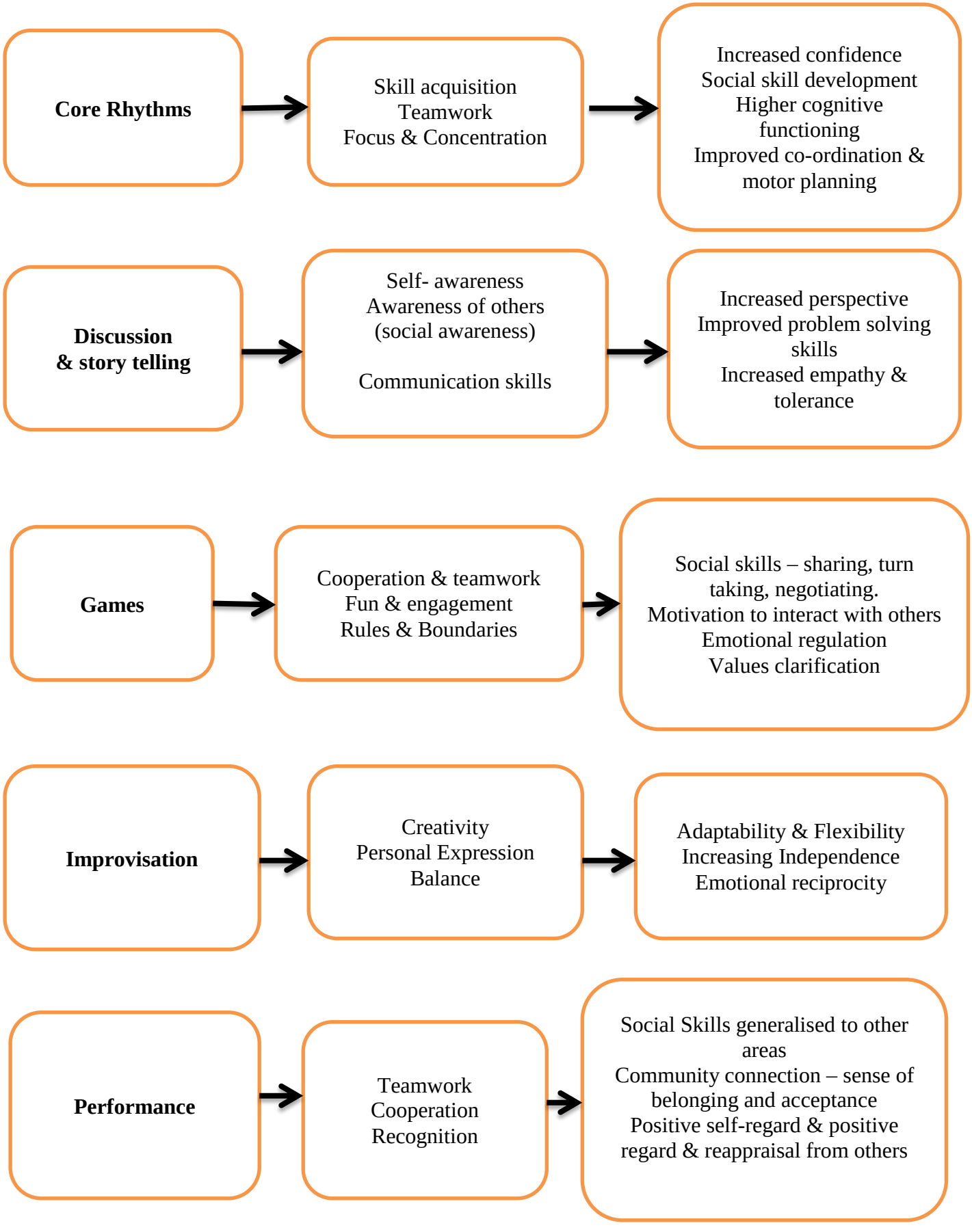
My student exhibits the following challenging behaviour:

1.	Shows a lack of respect to others and property.	Always 3	Often 2	Sometimes 1	Never 0
2.	Gives up easily when faced with challenges.	Always 3	Often 2	Sometimes 1	Never 0
3.	Exhibits a negative or low self-image.	Always 3	Often 2	Sometimes 1	Never 0
4.	Breaks rules or breaches codes of conduct in class or playground.	Always 3	Often 2	Sometimes 1	Never 0
5.	Struggles to become an integrated team member.	Always 3	Often 2	Sometimes 1	Never 0
6.	Is not able to work independently within set guidelines.	Always 3	Often 2	Sometimes 1	Never 0
7.	Cannot verbalise disagreement in a positive way.	Always 3	Often 2	Sometimes 1	Never 0
8.	Cannot contain angry feelings when others in the group do better than him/her.	Always 3	Often 2	Sometimes 1	Never 0
9.	Exhibits defiant or rude behaviour.	Always 3	Often 2	Sometimes 1	Never 0
10.	Is unable to express his/her feelings in a positive way.	Always 3	Often 2	Sometimes 1	Never 0
11.	Exhibits a lack of self-management skills.	Always 3	Often 2	Sometimes 1	Never 0
12.	Has little or no empathy with others.	Always 3	Often 2	Sometimes 1	Never 0

Additional Comments:

Appendix K

DRUMBEAT – The 5 Core Elements



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