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The 'exclusion' of autism:

How does music therapy aid the psychological,  
social and educational difficulties confronted by  
children with autism in a special education setting?

A thesis presented in partial fulfilment of the requirements for the degree of

Master  
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New Zealand.

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## ABSTRACT

This research project explores how music therapy can provide opportunities for inclusion and exclusion for children with autism. It draws attention to the various psychological, social and education difficulties faced by children with autism regarding social inclusion and social exclusion. The project also considers current attitudes towards social exclusion documented within the fields of special education and child welfare and rights.

The research was conducted using a qualitative and naturalistic enquiry approach. The therapeutic method was client centred. Case material is presented for three children with autism who attended individual music therapy sessions once a week for a period of five weeks. Characteristic narratives of each music therapy session are included in the body of the text. From these, the researcher highlighted moments of inclusion and exclusion observed in the music therapy sessions for each child. These were collaborated and presented in classification tables designed by the researcher from her observations.

Music therapy sessions reveal evidence of opportunities for both social interaction and social isolation for three children with autism. Moments were categorised as Inclusion Moments and Exclusion Moments.

Inclusion Moments were grouped under four headings: Client Initiated Moments, Verbal/Vocal Communication Moments, Engaged In Music Non Verbal Moments and Therapist Supported Inclusion.

Exclusion Moments were grouped under four headings: Inappropriate Social Behaviours, Purposeful Removal from Musical and Social Interaction, Withdrawal and Therapist Supported Exclusion.

Techniques to support inclusion included listening, playing, improvising, singing and movement, adapting the level of attention demanded from the child. Exclusion could be supported by allowing the child to withdrawal from verbal interaction and providing them with a safe and non-demanding environment.

This research project concludes that there are patterns of inclusion and exclusion in music therapy sessions and suggests that exclusion does play a role in music therapy for children with autism. The researcher highlights the difficulty for therapists to find a position that satisfies the child's right to social inclusion, while still respecting the child's lack of a need for social connectedness.

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# 1. INTRODUCTION

Music is the social act of communication among people,  
a gesture of friendship, the strongest there is.

*Sir Malcolm Arnold (Composer, 1921 - )*

This research project explores how music therapy sessions can provide opportunities for children with autism to be included or excluded from contact with others in their environment. The study focuses on three children with autism who attended individual music therapy sessions once a week over a period of five weeks.

Social interaction is an integral part of everyday life for every human being. Whether it is interaction between family members, friends, work colleagues or the person next to you on the bus, each of us must use social communication every day. The desire for interaction is innate and some communication skills are learnt from infancy. However, the need for social connection does not develop the same way for every person. Some children and adults find themselves excluded from social circles and environments for many reasons. They may lack a 'need' for social connectedness or be unable to act 'socially appropriately' or perhaps to fully understand social cues. For a child or adult with autism, social exclusion can stem from any or all three of these reasons.

Autism is widely studied. Research into autism is carried out in a variety of disciplines including education and health-related sectors. Autistic spectrum disorders including Autism and Aspergers Syndrome are complex clinical conditions and are challenging to define. The American Psychiatric Association Diagnostic and Statistical Manual of Mental Disorders (DSM-IV) states that delays in the development or an abnormal function in at least one of the three areas of social interaction, language for social communication and symbolic or imaginative play, must be present by the age of 3 years old for the diagnosis of an Autistic Spectrum Disorder (DSM-IV, 1994). The degree of impairment within the three areas varies in severity among people with autism. There does not appear to be a single defining feature of autism as characteristics of the disorder can vary widely (Autism New Zealand Inc., 2004).

This research project grew from the initial experiences of a music therapy student (the researcher) on placement during the final year of her Masters. The researcher worked at a Special Education Unit (SEU) within a local primary school. Almost all of the children who attend the unit are diagnosed on the autistic spectrum. Through observation and reflection on her experiences, the researcher noted how certain attributes of a child with an autistic spectrum disorder might commonly lead to the exclusion of such a child from the classroom or social environment. These included inappropriate social behaviours developed by the child to cope with the environment they were in, the lack of a 'need' to interact socially with their peers and/or a deficiency in the child's verbal communication. Can music therapy aid clients by developing social skills and providing opportunities for social inclusion? Importantly, is it necessary and indeed beneficial to the child to continually attempt to engage them in social interaction?

Essentially, autism is a condition driven by a natural predisposition towards aloneness. This research was conducted to find patterns of inclusion and exclusion within music therapy sessions and discover whether there was a role for 'exclusion' in music therapy for children with autism.

Inclusion and social acceptance can often be the main goals that a parent has for their child with autism. The New Zealand 1989 Education Act reflects this stating "those who have special educational needs (whether because of disability or otherwise) have the same rights to enrol and receive education in state schools as people who do not" (New Zealand Ministry of Education [NZME], 2005). The key focus areas of the Education Act include: more children gaining strong learning foundations; more students participating and achieving in education; provision of services - directly and indirectly - to children and young people with special education needs; and families and communities becoming more strongly engaged in education (NZME, 2005). Alongside this, the New Zealand Disability Strategy aims to remove the obstacles that prevent people with disabilities from participating to their full potential within society (NZME, 2005).

Music therapy is acknowledged as an effective therapy that can aid the development of social skills, communication skills and emotional expression in children with autism

(Baron-Cohen & Bolton, 1993). These abilities are integral to developing positive social interaction skills. The music therapy session can provide an environment where opportunities for social inclusion are presented for a child with autism (Warwick, 1995; Brownell, 2002; Pasiali, 2004; Alvin & Warwick, 1991).

### **1.1. Definitions of Terms**

At its simplest, music is the “art or science of combining vocal or instrumental sounds to produce beauty of form, harmony, melody, rhythm, expressive content, etc.” (English Oxford Dictionary, 2006). The word ‘therapy’ comes from the Greek word *therapeia* meaning a service or an attendance (Medicine Net, 2005). In essence, therapy is a service given to those who need it.

Music therapy is defined by the New Zealand Society of Music Therapy as:

the planned use of music to assist the healing and personal growth of people with identified emotional, intellectual, physical or social needs.

(New Zealand Society for Music Therapy [NZSMT], 2005).

Clinical and evidence-based music interventions are used to accomplish long and short term goals and to develop a therapeutic relationship between the client, therapist and the music (American Music Therapy Association [AMTA], 2005).

The word ‘inclusion’ comes from ‘include’ which means to comprise or embrace as part of a whole (English Oxford Dictionary, 2006). At any one time, a person can be included in many communities including his or her family, place of employment, friendship circles, hobby groups and local neighbourhood.

Exclusion is the opposite of inclusion. To ‘exclude’ is to shut out persons or living things or hinder persons from entering a place or society (English Oxford Dictionary, 2006). Inclusion into society is not automatic. Social exclusion can occur when problems – including special needs, unfair discrimination, poor skills and family breakdowns – lead to people being involuntarily deprived from participating in aspects of society (Humpage, 2006). Two forms of deliberate social exclusion exhibited by

children with autism are aloneness and social detachment. 'Exclusion' for children with autism is a complex experience as the very nature of autism 'forces' the child to seek aloneness. Berger (2002) highlights an important concept that needs to be considered when approaching the subject of 'inclusion' for a child with autism. Her article challenges readers to intuit, identify and derive meaning from being with 'other', challenging them to understand the concepts of 'alone' or 'lonely'.

This raises a question about the positive effects of structured exclusion. Are there times when a child with autism benefits from being removed from an environment? In regards to this study, is the music therapy session a form of structured exclusion for a child with autism? Music therapy can provide opportunities for social inclusion but does it also offer a form of exclusion beneficial for a child with autism?

## **1.2. Research Questions**

This research aims to explore psychological, social and educational difficulties faced by children with autism and how music therapy can assist the children with these difficulties. It considers current attitudes to social exclusion documented within the fields of special education and child welfare and rights.

The project considers the following questions:

- What evidence is shown of social interaction and social isolation in music therapy sessions for three children with autism?
- How can a music therapist provide opportunities for social inclusion in the sessions?
- How can a music therapist (and support worker) support the child in their decision to either be included or excluded from the music therapy environment?

### *1.2.1. Background*

Since 1990, children with special needs (including autism) have had opportunities to attend local schools. The New Zealand State Education system was established in 1877 and four residential special schools were established in the late 1800's. The Special Education Service was formed in 1989 but it was not until 1990 that the Education Act no. 80 came into effect. This gave children with special needs the right to access local schools. In 1991, fully funded early intervention services were established providing service to early childhood students with special needs (Littek, 2000).

Some special schools remain in New Zealand. However, emphasis is being placed on children attending local schools and local early childhood centres. Special Education Units or Special Learning Units now exist within some primary and secondary schools in New Zealand (New Zealand Ministry of Education, 2005). These allow children who are not completely mainstreamed to have the opportunity to attend mainstream classes for short periods of time and then return to their own classroom.

### *1.2.2. School Setting*

This research took place in a Special Education Unit (SEU) of a small local primary school. The SEU caters for 5 to 13 year old ORRS (Ongoing and Reviewable Resourcing Scheme) funded students (NZME, 2005). The school promotes inclusive education and throughout the year there are many opportunities for the SEU students to participate in whole-school activities. These include such events as school singing and assemblies, class trips and electives. The SEU students spend interval and lunchtimes in the playground with other students.

Some of the SEU students are mainstreamed for 30 minutes a day, several days throughout the week. Here the children are able to develop a sense of belonging and practice social and communication skills including appropriate behaviour, co-operation and sharing. It is hoped that as the children become used to the classroom setting, their time spent there will increase.

The SEU has two teachers and five education support workers (ESW) working with the students. Each ESW has two students they work closely with throughout the year. All staff members are experienced and committed to providing the best environment for the education and well-being of the students. The school has a Group Special Education (GSE) team which consists of a behavioural psychologist, speech language therapist, physiotherapist and an occupational therapist. The team, together with parents, the Head Teacher, the child's main ESW and other specific outside organisations, develop an Individualised Education Plan (IEP) for each student based on their current skills and needs. The areas that are covered in the IEP include communication, social skills, physical exercise, self-care and academic curriculum. Each of the individual team members visits the children at the school on a regular basis to assess progress and evaluate the current goals.

The daily academic programme for each child is individualised to their strengths and needs. It is developed from the child's needs highlighted in their IEP and has an overall aim to promote the child's independence. The morning programme consists of activities based around language, numeracy, social skills and functional skills. Morning slots are also allocated for any specialist programmes such as Speech Language therapy, Occupational therapy or Physiotherapy. The afternoon sessions include activities such as library visits, developmental activities, school singing, a swimming programme and sensory activities.

A visual timetable system has been implemented in the classroom that allows the children to see what their morning activities will be. Small pictures with representations of the activities are placed in each child's individual folders with the current activity placed on the front of the folder. Alongside this is a photograph of the teacher or ESW that is assisting the child with the activity. Independent activities are also scheduled in the programme for the children to enjoy unaccompanied.

Music therapy sessions are run over a day and a half. A group music therapy session is run once a week, and all children participate in unless attending their mainstream classroom. The group music therapy session and individual music therapy sessions are included in the visual schedule for each child as appropriate.

### *1.2.3. Physical Environment*

The SEU is made up of two classrooms joined together within the main school. The main classroom is a large room with tables, a sensory corner, a swing chair, a toy corner, a bathroom and a kitchen. This main area is where the children complete their academic work, life skills work and play.

The second classroom is accessed through a double handled door off the main classroom. This space is used less often, for structured activities and independent activities. It contains a computer and several tables. In this room the music therapy group and individual sessions are conducted. A large wall of windows looks out onto the playground and provides the space with light, making it bright and airy. Children's artwork is displayed on all the remaining walls.

Almost all the children had an ESW attend the music therapy sessions with them. The ESW would participate in the music if it was required of them. They are understanding and sensitive to the music therapy session and do not interrupt the music unless necessary.

For each individual music therapy session, three chairs were placed in a semi-circle with a variety of percussion instruments displayed on the floor in front of them. The chairs faced towards a wall to offer a sense of a boundary or defined musical space. The amount of usable space within the classroom is large and contains other objects that can potentially be distracting for the children. Providing a boundary for the musical space often proved difficult as the children knew where their favourite things in the room were stored.



## 2. LITERATURE REVIEW

### 2.1. Music and Autism

Autism is a disorder which manifests in a child before the age of three years. An early study by Kanner (1943) highlighted six main characteristics of a child with autistic behaviour. Subsequent research has supported Kanner's observations and the criteria for the diagnosis of autism continue to be refined. The American Psychiatric Association's criteria for an 'autistic disorder' are as follows:

- Delays or abnormal functioning in at least one of the following areas, with onset prior to age 3 years: (1) social interaction, (2) language as used in social communication, or (3) symbolic or imaginative play.
- Qualitative impairment in social interaction (manifested by two or more of four criteria)
- Qualitative impairments in communication (manifested by one or more of four criteria)
- Restricted repetitive and stereotyped patterns of behaviour, interests and activities (manifested by one or more of four criteria)
- Rett's syndrome, Childhood Disintegrative Disorder and Asperger's Syndrome are all excluded

(DSM-IV, 1994)

Although there are many similar characteristics present in all children diagnosed with autism, the severity of the condition and its characteristics vary greatly between children. Trevarthen, Aiken, Papoudi and Roberts (1998) provide a time line of the development a 'standard description' of autism has taken. From this literature, Trevarthen et al (1998) highlight characteristics that can be found in children with autism. These include:

- having a primary inability to perceive ‘others’ as people
- abnormal ways of relating to other people
- showing strong and upsetting reactions to various situations
- investigative intelligence that is illogical or distorted
- difficulty with initiating physical movements
- a failure to comprehend other person’s beliefs

(Trevarthen et al, 1998)

Since early 1990, the rate of diagnosis of children on the autistic spectrum has increased, highlighting a need for successful interventions that will assist these children to reach their full potential. Professionals and parents have noted a positive response to and interest in music by children on the autistic spectrum (Edgerton, 1994; Whipple, 2004). Little is known about specific reasons why children with autism often respond positively to music (Davis, Gfeller & Thaut, 1999). However, Alvin and Warwick (1991) point out that music is able to penetrate the subconscious and is a way to connect with an individual at any level of intellect (Alvin & Warwick, 1991).

## **2.2.Music Therapy and Autism**

Music therapy uses music as the therapeutic tool to form a relationship between client and therapist. Elements of music – organised rhythm, melody, harmony, pitch and tempo – are used to assist individuals with social, emotional, cognitive, physical and spiritual difficulties. Individualised music therapy goals focus on the rehabilitation, healing, development or maintenance of a physiological or psychological need of the client (AMTA, 2005).

Music is an attractive stimulus which is flexible and creative (Davis et al., 1999; Wigram, 2002). Wigram (2002) reports that some clinicians suggest music therapy is not suitable for children with autism as music is too unstructured. He argues against this belief, explaining that children with autism create their own structure and routine from their environment, which can become rigid and repetitive. Wigram (2002) suggests that

living in such a structured world offers false security for a person with autism as the world and its people are not like that. Music itself contains many layers of form and structure but is creative and flexible within these structures. Music therapy offers a positive environment for a child with autism to begin to explore an 'unsafe', 'unstructured' world. Wigram (2002) states the real value of therapeutic development as "the fostering of flexibility and creativity within a structured form" (Wigram, 2002: 11).

The core features of autism are known collectively as the 'triad of social impairments' (Wing, 1993). The triad has three areas; communication, participation and the understanding of social interaction cues and imaginative play, in which children with autism have difficulties (Wing, 1993). Each of these three core features of autism range in severity among people diagnosed with autism and the features can also vary within one person (Autism Spectrum Australia, 2002). It is suggested that children with autism do not show the main forms of joint-attention behaviour and lack the ability to see things from another person's perspective (Baron-Cohen, 1995; Baron-Cohen, Tager-Flusberg & Cohen, 2000). Described as a lack of 'theory of mind', children with autism can display a genuine incapacity to understand other people's beliefs (Baron-Cohen, 1995; Perner, Frith, Leslie & Leekam, 1989).

Brown (2002) examined how the music therapy environment can provide a child with autism with the opportunities and support to explore the difference between fantasy and reality. An understanding of a fantasy-reality separation aids the development of mutual relationships. She provides examples that show the music therapy session as a secure environment for the child to explore this separation. Brown (2002) goes on to explain that for a "child with a disabling condition such as autism ... making life manageable often involves developing behaviour that seems even more dysfunctional" (Brown, 2002: 84). These behaviours can impair the child's ability to interact with their environment and social peers and exclude them further from inclusion opportunities.

Music can be a motivating subject, encouraging concentration and participation for some children (Jellison & Gainer, 1995). Therefore, the music education class can provide an opportunity for special education students to be mainstreamed. Kostka

(1993) compared the frequency of the autistic behaviours (arm flapping and body swaying) of one child with autism in the regular music education class versus in his special education class. Results showed that the behaviours were less prevalent in the regular music class. The student appeared most attentive during the listening activities. He appeared to also distinguish between the classes and adapt his behaviour accordingly. Kostka concluded that, for this child, mainstreaming had a positive effect on promoting appropriate social behaviours.

### ***2.2.1. Language and Communication Difficulties***

Primary music therapy goals for children with autism include the development of both verbal and nonverbal communication, the development of social skills and the facilitation of learning pre-academic and academic concepts (Davis et al., 1999). A recent study highlighted the greatest percentage of clients with autism had language/communication as their goal area, behavioural/psychosocial as the second most frequent goal area followed by perceptual/motor, cognitive and musical goal areas (Kaplan & Steele, 2005).

Pragmatic speech skills develop naturally in babies. These linguistic tools are practiced through the child's first year and are needed for transforming speech into conversation or dialogue (Newson, 2001). The major receptive and expressive pragmatics of speech are essential for social interaction and communication (*see Table 1*).

**Table 1:** The Major Pragmatics of Language – Receptive and Expressive

Social timing	(implicit in all pragmatics)
Body language	facial expression (including eye contact) gesture (especially pointing) posture, stance, personal space
Listening skills	turn-taking noticing signals of impending speech knowing who is being addressed (identifying with group) maintaining attention to body language <i>showing</i> that you are attending
Intonation	for meaning for emphasis
Volume	for meaning adaptation to distance (including attentional distance)
Understanding intention	teasing (6 months onward) joking, sarcasm, metaphor, irony (later)
Shared understanding	with acknowledgement: includes <i>social imitation</i>
Sharing intention	and acknowledging this
Sharing interest	drawing attention to for parents' <i>interest</i> bringing to show for parents' <i>interest</i>

(Newson, 2001: 207)

The development of these essential communication skills is often lacking or disordered for children with autism (Newson, 2001). Such impairments have a negative effect on the child's inclusion into their peer group and family. Society demands an ability to use language effectively for social interaction. A language delay can impact extensively on a person's ability to interact as social cues are often learnt through interaction.

People may see music as a universal language as it is able to convey and provoke emotions and moods without the need of words (Brown, 2002). Because individuals with autism often feel discomfort with interacting with others, indirect or detached ways of socialising can be more comfortable for them (Kluth, 2003). Music therapy offers a

non-verbal form of therapy applicable to both verbal and non-verbal persons (Boxhill, 1985) by

allowing autistic children to put into their own words the confusing scenarios that litter everyday social interactions [it] enables them (and us) to develop more meaningful strategies to facilitate their understanding and navigation of such events.

(Dunn, 2000:103 cited in Charles, 2004).

Studies have suggested that music can be used effectively as a tool to encourage intentional verbal and non-verbal communication behaviours (Pasiali, 2004). Pasiali's (2004) own research results, while not conclusive, indicate that prescriptive songs can be a viable intervention to promote the acquisition of social skills for children who have autism. She highlights Gore's (2002) thesis which explores the use of emphasized speech in collaboration with music therapy techniques in order to increase the communicative attempts of children who display echolalic behaviour. Results suggest that music has a positive effect in increasing both verbal and non-verbal communication of children with autism. Edgerton (1994) investigated the use of improvisational music therapy as a means for non-verbal communication. Results strongly suggest that this type of intervention was effective in increasing the communication behaviours of children with autism.

Charles (2004) writes about her experience working with a child who has social and communication difficulties. Her article describes how a child is able to gain valuable insights into his behavioural difficulties through informal joint interviews with a classmate. An important outcome from the study was that teachers and peers gained insight into the child's social and sensory difficulties. Dunlop (2003) investigates the opportunities presented by engaging students with an Autistic Spectrum Disorder in group work. She found that understanding between peers needs to be a focus in group work. Although friendship may not develop, working in a group can develop social skills and understanding, in meaningful environments (Dunlop, 2003).

Brown (2002) explains that for a "child with a disabling condition such as autism ... making life manageable often involves developing behaviour that seems even more

dysfunctional” (Brown, 2002: 84). Socially inappropriate behaviours can often lead to the child being excluded from their environment. It may not be the child’s actual language levels but the inappropriate behaviours, poor social skills, and communication problems that are the main block to inclusion (Boyd, 1991).

### *2.2.2. Behavioural and Psychosocial Difficulties*

Kluth (2003) examines how to rethink behaviours that a child with autism can display. She challenges those who choose to remove the child from the situation, either out of a classroom or to a ‘time out’ chair. She believes that one of the primary reasons to not remove children from the classroom is related to the definition of inclusion:

Students should feel without question that they are members of their classroom community and they should not have this membership constantly threatened.

(Kluth, 2003: 178).

Behaviours displayed can be a reaction to the current environment the child is in, and the actions of those around them. Consistently removing the child can prevent students and teachers from understanding complex behaviours that are socially situated. The context in which the behaviour occurs is critical as it may hold clues as to why the behaviour is being exhibited. Possibilities include pain, confusion, tiredness, embarrassment, frustration, coldness, sadness and anger. Kluth (2003) states that the child

may actually be communicating in the only way he can, responding to pain, asserting himself, escaping from an unpleasant or intolerable situation, or resisting the way he is being treated ... Clearly, any and all of these are possibilities and should be considered when framing behaviour.

(Kluth, 2003: 155).

Promoting appropriate social behaviour has been considered in many empirical research studies. Nordoff and Robbins (1977) note that not all responses in music therapy are participatory. They wrote that

with autistic, post-autistic or other emotionally disturbed children, resistiveness appeared in many forms to impede or *influence* the development of relationship.

(Nordoff and Robbins, 1977:181)

Nordoff and Robbins (1977) go on to highlight a paradox in the responses of the children, saying that,

resistiveness was a corollary to participation – a progressive response was immediately preceded and/or followed by one that was resistive in some way.

(Nordoff and Robbins, 1977: 181).

Despite this resistive nature, studies have shown that music therapy intervention can produce positive effects on social behaviour (Warwick, 1995; Brownell, 2002; Pasiali, 2004); social interaction (Alvin & Warwick, 1991) and language and communication development (Edgerton, 1994; Gore, 2002 cited in Pasiali, 2004).

Listening to background music and alternating music listening with instructional learning has been seen to reduce off-task behaviours and problematic, aggressive or ritualistic behaviours (Burlison, Center & Reeves, 1989; Hollander & Juhrs, 1974; Orr, Myles & Carlson, 1998). Musically adapted social stories can also be an effective way to modify deviant behaviours (Brownell, 2002).

Music therapy can create unique opportunities for symbolic play through the use of music. This is beneficial for children with autism as they do not use opportunities to play the same way that children without disabilities do (Sherratt, 2001). Play is often underestimated for children with autism as language acquisition can be seen as more important. But play offers opportunities for the development of a range of socio-cognitive abilities (Sherratt, 2001). As music is an attractive stimulus, it can create enticing play opportunities for the child. Littek (1996) also acknowledges that less



structured cooperative learning activities can be very successful in promoting social inclusion (Littek 1996).

### **2.3.Context For The Research**

Inclusion for a child with autism means receiving “effective access to ... education, training, health care services, rehabilitation services, preparation for employment and recreation opportunities” (Article 23, United Nations Convention, 1990).

Mainstreaming is a form of inclusion used within education. Mainstream students with special teaching needs are placed in regular classrooms with their age peers for most or all of the school day. The student is able to be withdrawn from the classroom to attend special therapy or planned intervention (Littek, 2000).

Zelaieta (2004) examined the many levels and ways that exclusion and inclusion take place within the British education system and used this as a starting point to explore the contribution special schools can give to the development of inclusive practices in local schools. Her research found that special schools show more commitment to overcoming exclusionary barriers and are often more creative in providing ideas to promote inclusion. Zelaieta goes on to highlight initiatives developed to promote inclusion and the top three limitations to developing inclusive practices, identified by teachers. These limitations were the school’s financial constraints, a lack of leadership among staff and problems with the local education authority.

Darrow (1999) highlighted the need for collaboration between special educators, music therapists and music educators. Her study found that most music educators felt that the inclusion of students with disabilities in their classes had a positive effect for both the disabled students and their peers. Darrow, Colwell and Kim (2002) review studies which show little positive development of music educators’ attitudes towards teaching mainstreamed children with disabilities. They urge music therapists to examine instructional strategies to facilitate learning in the mainstreamed music class and to promote the positive effects mainstreamed children can experience.

## 3. METHODOLOGY

### 3.1. Rationale

This research project grew from the initial experiences of a music therapy student (the researcher) on placement at a Special Education Unit within a primary school, specifically music therapy clinical work conducted with children with autism. Observations and reflection on her experiences led her to question the paradox nature of autism and if music therapy could support this. She noted the focus of the music therapy session was often on achieving and maintaining the direct engagement of the child.

Berger (2002) highlights an interesting point the researcher wished to explore in this research. There can not be inclusion without exclusion and exclusion often appeared to have a negative connotation to it. However, Berger suggests that we, as therapists or carers, may be unable to understand or accept the concept of not 'needing' social connectedness. She states that "if the need for 'other' is limited or non-existent, then who really has the 'need' to modify the state of aloneness to one of 'connectedness'? ... So meaning well, we often try to superimpose our own attitudes and needs, ones that we consider essential" (Berger, 2002).

The researcher also reflected on her own techniques used in the session and how these supported inclusion and exclusion. Play is often underestimated for children with autism as language acquisition can be seen as being more important. But it is play that "offers opportunities for children to develop a range of socio-cognitive abilities" (Sherratt, 2001:148). As music is an attractive stimulus, it can create enticing play opportunities for the child.

These thoughts raised questions for the researcher. How could the music therapy session support social inclusion while respecting the child's need for exclusion? Importantly, is it necessary and beneficial to insist on direct social interaction from a child with autism?

### 3.2. Research Approach

The research was qualitative and based on a naturalistic inquiry approach. The therapeutic method was client centred. Naturalistic inquiry is defined by Denzin (1971) as:

The studied commitment to actively enter the worlds of native people and to render those worlds understandable from the standpoint of a theory that is grounded in the *behaviours, languages, definitions, attitudes* and *feelings* of those studied. Naturalistic behaviourism attempts a wedding of the covert, private features of the social act with its public, behaviourally observable counterparts ... The naturalist is thus obliged to enter people's minds, if only through retrospective accounts of past actions.

(Denzin, 1971:166-167)

Naturalistic inquiry is a "means to gain insight into social situations by revealing patterns of interaction" (Aigen, 2005: 353). The primary tool for data collection and data analysis is the researcher. The research is entered into with no preconceptions; with a focus created that has personal relevance to the researcher.

Elements of naturalistic inquiry are evident in this research project. The researcher specifically chose the three participants as opposed to using a random sample as the means of selection. This is called purposive sampling. Data collection took place in the natural setting of an individual music therapy session, which was conducted as it would have been had it not been the object of research. The researcher was the primary tool for data collection and analysis. The researcher acknowledges her immediacy in the project as music therapy student, data collector and data analyser. An attempt to temper the bias was made by conducting a 'member check' of the results with a peer and colleague of the researcher.

The data and results are presented for each case in turn. Characteristic narratives of the sessions were included to give the reader the opportunity to experience the context of the research as a whole. Context must be considered when analysing behaviour (Kluth, 2003).

Aigen (2005) highlights the three activities that support credible findings within qualitative research. These are prolonged engagement, persistent observation and triangulation. Prolonged engagement means working closely with the clients for a substantial length of time, enough to establish trust between the participants and the researcher. This project was conducted towards the end of the school year and in the middle of a school term. The researcher had been working with the three participants for nine months previous to the data collection period and during this time had built a close therapist/client relationship with the children.

Persistent observation was taken into account by the researcher. She had worked with and observed the three participants for nine months prior to the data collection period. Professional and personal session notes were recorded throughout the data collection period and referred to for data analysis. Videotapes were employed to allow the researcher to review the sessions as often as needed for data analysis. An experienced music therapist was asked to review samples of the videotapes in order to verify the accuracy of the researcher's findings. A member check of the results section established the researcher's findings to be consistent.

Some researchers have found the use of triangulation (using various methods, theories, sources and investigators [Lincoln & Guba, 1985]) to be less important. While acknowledging that "a convergence of findings on a particular construction makes it more credible" (Aigen, 2005: 360) the researcher did not observe the use of triangulation in her method as to do this was beyond the time-scale of the project.

### ***3.2.1. Ethical Considerations***

As this project required the use of human subjects, ethical approval was applied for from the Massey University Human Ethics Committee (MUHEC) and the National Human Development and Ethics Committee (NHDEC).

Ethical approval was given serious consideration. The MUHEC guide defines a child as anyone aged 15 years or younger. High ethical standards were required for this project as the subjects were children who were observed in a vulnerable therapeutic situation.

Parents or caregivers were well informed about the context of the research and the way in which it was to be conducted.

Each selected child was given consent forms that requested permission for the child's inclusion in the study (*See Appendix Two*). An information sheet was provided to the child's parents or caregivers outlining the context of the research, the way in which it was to be conducted, the child's rights and the priority of confidentiality (*See Appendix One*). The children and the parents were given the right to withdraw from the research at any time with no effect on the availability of clinical services to the child. Every effort was made to maintain the children's anonymity throughout the research.

The child's parents/caregivers were asked to read a separate information letter to their child and sign it on the child's behalf (*See Appendix Three*). The letter explained the circumstances of the project in simpler language in an attempt to allow the child to understand the situation (*See Appendix Four*). The parents/caregivers were the primary consent givers for initial participation permission. Permission was required for the child to participate in the study with separate permission required for the videotaping of sessions.

Ethical approval was granted and consent received from all three participants in November 2005. Data collection commenced immediately. Pseudonyms were used throughout the project and the written video descriptions to protect the children's identity.

### **3.3.Procedures in Data Collection**

This research project involved studying the actions and reactions of three children with autism in individual music therapy sessions. It aimed to explore psychological, social and educational difficulties faced by children with autism and how music therapy could assist the children with these difficulties.

The procedures intended to allow the observation of:

- Any evidence shown of social interaction and social isolation in music therapy sessions for three children with autism

- How the music therapy student provided opportunities for social inclusion in the sessions
- How the music therapy student and Educational Support Worker (ESW) supported each child in their decision to either be included or excluded from the music therapy environment.

The research was undertaken using a client-centred naturalistic inquiry approach. It was necessary to have an ESW present in each session as the researcher was not legally responsible for the children she worked with. It was for her own, the school's and the child's safety to have an ESW present in the session. Overall, it was found to be beneficial as the ESW was able to give feedback to the researcher after each session.

The following list outlines the stages of the research process:

1. Regular weekly individual music therapy sessions were conducted for each of the children over a period of five weeks. On one occasion, one child was absent from school because of illness and therefore only four data collection sessions were recorded. The five-week time period occurred towards the end of the researcher's year long music therapy practicum placement of the researcher, and began after ethical approval was granted.
2. Music therapy sessions were conducted in the usual way. The child, the researcher and an ESW attended each session. The sessions were between fifteen and thirty minutes long depending on the child's ability to concentrate on the day. The sessions were held in Special Education Unit's second classroom.
3. During the same day, brief descriptive file notes were made by the researcher to be placed in the child's file as a record of attendance to music therapy and an account of what occurred. The researcher also recorded personal notes that detailed her thoughts and feelings about the music therapy session. These were handwritten and kept in a folder that remained with the researcher for the entire data collection period. The ESWs' thoughts and feelings about the sessions were occasionally recorded in these notes with their permission. Pseudonyms were used for both child and ESW in the personal notes.

4. Each session was videotaped for research purposes. The video camera was placed in an inconspicuous place in the room. Unfortunately the space was larger than the video camera was able to encompass and if the child left the musical space, there was a possibility that they moved out of the viewing area of the video camera. Every possible effort was made by the researcher to ensure that the video camera recorded as much of the session as possible. The videotapes were labelled with each child's pseudonym and were stored securely and confidentially.
5. Four or five individual music therapy sessions were recorded for each child. Each of these was reviewed and described by the researcher alone from the video data and these descriptions were used for data analysis. At no stage was the child's real name used in the description. An experienced clinical supervisor viewed samples of the video descriptions to ensure accuracy of the researcher's descriptions and analysis. Her thoughts were discussed with the researcher and there were no amendments necessary. The researcher acknowledges the strong possibilities of bias in this study as clinical work, data collection and analysis were all conducted by one person. The observations of the clinical supervisor were a form of 'member checking'.
6. Features of the sessions that would be deemed moments of 'inclusion' and moments of 'exclusion' were selected by the researcher after analysing the videotaped sessions and reading the professional file notes and the personal therapist notes. Inclusion moments included the following criterion:
  - shared interaction between the child and/or the researcher and ESW, initiated by either party.

Exclusion moments included at least one of the following criteria:

- an action or behaviour from the child that would lead to them being excluded from the environment
- an apparent lack of interest from the child for interaction with the music therapy student and/or ESW.

7. Further 'member checking' was done by a peer of the music therapy student. Discussions with the researcher following this did not highlight any inconsistencies in the case material or her findings.

### **3.4.Participants**

Each of the children met the inclusion criteria for the research. To participate in the study, it was necessary for the child to be attending the Special Education Unit, have attended music therapy since February 2005 and be diagnosed as having an Autistic Spectrum Disorder. Each of the children who participated face various social and communication difficulties that at times appear exacerbated by their autism.

John is a ten-year-old boy diagnosed with autism. He has developed an inappropriate behaviour of throwing objects when he is over-excited or angry. Michaela is a six-year-old girl diagnosed with autism. She often chooses to exclude herself from the environment around her, preferring instead to gaze out the window while singing to herself. Tom is a six-year-old boy diagnosed with autism. He exhibits echolalic language and often chooses to be a passive participant in activities. Detailed descriptions of each child are included in their respective cases.

Each of the children attended music therapy during the school terms, with the researcher for the nine months previous to the data collection period.

### **3.5.Data Presentation**

The data and initial results are presented for each case in turn. The sessions are written as characteristic narratives to allow readers to experience the context of the research as a whole. It is hoped this will aid the readers to understand the complex characters of the participants. An overall description of each child is given which includes the child's long term clinical music therapy goals. These are not the focus of this study but played a role in the choice of participants. All three children involved in this study had clinical music therapy goals based around social interaction, social communication and self-expression. The short term objectives were designed to help the children meet these goals. This meant that specifically designed musical activities to promote inclusion were often included in the music therapy sessions.



## 4. SESSION NARRATIVES DURING A PERIOD OF MUSIC THERAPY FOR THREE CHILDREN DIAGNOSED WITH AUTISTIC SPECTRUM DISORDER

This substantial chapter presents the case material for each of the three children who took part in the study. The session-by-session format is written as a chronological narrative of the music therapy intervention. Within the narratives, inclusion and exclusion moments are highlighted in italics font type with a text box around it. A single line text box identifies the inclusion moments and a double line text box identifies the exclusion moments. The exclusion and inclusion moments for each child are discussed briefly at the end of their case material. Inclusion and exclusion moments are presented in table form and discussed (*See Chapter 5*).

The case material is presented in the present tense with the use of 'I' for the music therapy student. This was done to give the feeling of immediacy and acknowledge the researcher's subjective involvement in the sessions. The session notes are initially detailed in description. As the reader moves through the sessions, the notes become less detailed as only significant contextual points of the session are included.

### **4.1. Case Material For 'John'**

John is a ten year old boy diagnosed with autism, dyspraxia, cerebral palsy and Attention Deficit Hyperactivity Disorder (ADHD) who has fine and gross motor skill difficulties. He displays repetitive motor mannerisms including rocking on his feet and waving his arms. His articulation is generally understandable but he has difficulty with comprehension of language. John is an only child and began attending the SEU at the beginning of the year.

John was referred to music therapy initially because of his positive response to music. He enjoys listening to music, including story books and nursery rhymes, and shows an obvious enjoyment at singing a wide variety of songs including chants and nursery rhymes. Before this project began, John had been attending both group and individual

music therapy sessions during the school terms for nine months. He attends music therapy with the same ESW each week. John enjoys coming to music therapy, often singing along in the songs.

After the initial referral, it became apparent that music therapy could provide John with a supportive environment in which he could express any internal energy in an appropriate way. The music therapy session could introduce and encourage alternative ways for John to act if he is angry or upset. The behaviours he displays when he is excited or agitated include rocking on alternate feet and throwing objects. Sometimes it appears that John displays the throwing behaviour to elicit a response from the adults around him. The behaviour may be linked to frustration and/or pent up energy and the action of throwing provides a release for him.

John's music therapy goals were developed after the initial music therapy assessment sessions, from his Individual Education Plan (IEP) and from discussion with the Head Teacher. The IEP areas of development include: developing John's concentration span, expanding his sensory experience, reducing his throwing behaviour and encouraging positive social interaction skills.

John's long term clinical music therapy goals are as follows:

- develop positive social skills
- develop John's concentration span

The music therapy sessions aimed to provide a positive sensory experience for John and a secure environment to encourage his self expression.

As the data collection period began, John's inappropriate throwing behaviour had become a problem in the classroom. He was showing signs of frustration and anger more often each day. This was becoming a concern for his health and safety, and also other children and support staff's safety. His approach to music therapy had also changed dramatically. Until recently, John had enjoyed music therapy immensely, finding its activities engaging and improvisations a time for exploring sounds. Immediately previous to this research commencing, John had displayed inappropriate throwing behaviour in the music therapy session to such an extent that the instruments

were removed from him to avoid injury to any person present in the session. This was a dramatic change from the comfort and enjoyment he used to display in the sessions.

A visual schedule was developed by the music therapy student and introduced to John in the music therapy sessions. Visual schedules are excellent ways of providing information as a static constant as opposed to spoken language, which is temporal (Cantello-Daw, 2001). Both pictorial and written schedules present the events of the day or session, who will be involved and the sequence in which the activities will occur in a logical and orderly way (Hodgden, 1995). The schedule predetermined what instruments John was going to be offered in the session and initially this was kept to a minimum amount. Every effort was made to reduce any agitation and tension John may experience in the session.

#### *4.1.1. Session One*

The overall aim of this first session was to provide a positive experience for John and a quiet place for him to be calm. From observing John in the classroom prior to the music therapy session, it was apparent that his energy level was high and it was necessary to be aware of the potential risk he could throw an object. I decide to only place four instruments out for him to choose from. These were the circular bells, bongo drum, tambourine and lollipop drum.

As he enters the musical space, John identifies the four activities on the visual schedule in the correct order. He sits down and I begin the 'Good Morning' song. He moves to the ground and begins to play the circular bells in a perseverative way – hitting the bells repeatedly in a steady beat while spinning them around. I continue to sing. He plays without making eye contact but fills in the pauses I leave in the lyrics. After the song finishes, he continues to beat on the bells. I join him on the bongo drum mimicking his beating in an effort to draw him out of his perseverative beating.

He explores each instrument that is on the floor in front of him. He beats on each one while repeatedly asking, "What does that sound like?" I vary my answers from the simplest answer, 'a drum beat', to more imaginative answers including 'a giant walking'. He moves back to playing the bells.

*For an extended period, we improvise together, John on the bells and I on the drum. He appears to not notice me beating the drum in time with his playing of the bells as he does not make eye contact with me or look at my instrument. After a phrase of beating simultaneously together I leave space for him to beat the bells alone. He hits the bells once then looks towards my hand anticipating my hit. This single beat turn taking lasts for an extended period of time while John also tries to hit the bells in an ascending scale. During this time, he appears focused and organised as his playing has taken on a direct and decisive quality. John has also remained quiet during this improvisation.*

He moves to join me on the bongo drum and describes our fast beating as ‘a giant running’. He moves quickly to play the tambourine, asking what it sounds like. I reply that it sounds like sleigh bells and John turns to look out the window before exclaiming, “Look its snowing outside!” He briefly joins in singing ‘Jingle Bells’ before becoming distracted with trying to place his head through the tambourine. I encourage him to make the horses run faster (play faster) before slowing down to a stop and end the song. As he puts the tambourine down, he comments, “I nearly shook my arms off”.

John appears indecisive about which instrument to explore next and suggests we get more instruments to play with. So far he has been beating on each instrument regardless of whether or not they are supposed to be played with a beater, so I place the lollipop drum in front of him.

*He initiates playing the instrument himself. He begins by beating it loud and fast before suggesting we draw around it in a circle. I trace a circle on the bongo drum I am holding and John traces around the lollipop drum. I begin to sing, ‘Round and Round the Lollipop Drum’ [Pop Goes the Weasel] and John attempts to join in although he does not know the words as I am improvising them. John appears focussed and completes the song twice, tracing on his drum and attempting to sing along with me.*

As the activity finishes, he immediately begins asking, “What does that sound like?” frequently changing the instrument he is playing. He does not respond to me when I ask him the same question until he is playing the rain stick. He then responds that it sounds like a river.

*He begins to pull apart the instrument he has in his hand. The shaker has streamers on the end of it and he rips these off with quiet determination. I reach out and remove the beater and streamers from his hands, placing them out of reach on a shelf, without speaking. He readily releases it and sits quietly, waiting for my guidance for the next activity.*

To direct him towards a positive activity, I present him with two picture instrument cards for him to choose one. He deliberates for awhile before choosing the bongo drums. The other instruments are packed away to leave the musical space clear.

We explore different sounds that we can make on the bongo drum – scratching, banging and knocking. John describes these three sounds as sounding like mice scratching, a giant walking and someone knocking on the door.

*John copies any actions that I initiate including singing, “Hello” (a major third fall) and “Is anybody home?” (holding one high note) into the bottom of the bongo drums. However, he continued to get progressively louder each time he copied the words until he was shouting. I put my hand behind my ear to signal that I was listening for an answer from the bongo drum. John immediately imitates this and waits quietly. This turns into a game. We sing out ‘hello’ and ‘is anybody home’ three times in increasing volume before sitting quietly for three seconds ‘waiting’ for an answer.*

When he tires of this game (after three times through), he moves back to asking, “What does that sound like?” and I sing this phrase back to him while I play the guitar.

*John places the lollipop drum on top of the bongo drum and presses on down on it – a movement that if he presses too hard, he will break the drum. He makes eye contact with me while doing this and I place my hands on his to gently remove them. He quickly releases the drum.*

He immediately asks for another instrument and I offer two more instrument picture cards to him. He does not choose any of them and I offer for us to finish music. He answers yes and I sing the ‘Goodbye song’ for him.

#### 4.1.2. Session Two

The overall aim of this session was for John to have a successful music therapy session by getting him to have some fun and to follow at least three activities on the session plan. John had had a disrupted week as he was off school for a period with sickness. In this session, I am open to John leading the session if he is in a good space, otherwise I will provide structured activities to guide him.

John enters the musical space and when prompted, identifies the first activity on the visual schedule. He remains seated while I am singing to him, but when I pause for him to sing the ESW's name, he gets up out of his seat and moves over to the shelves where the circular bells are sitting. He sings the ESW's name once while playing the bells but quickly becomes distracted again and moves to the covered box of instruments placed behind my chair. He is physically redirected back to his seat and I show him the visual schedule again. With prompting, he removes the 'Good Morning' song picture and correctly identifies that 'John chooses an instrument' is next. He takes a long time to choose the lollipop drum from the instruments offered him.

*The next activity is the song 'Kiwi Rock' - a song that encourages clients to play their instrument both by themselves and together with the group. John successfully completes this activity, playing along with me and stopping in the appropriate places at the end of each verse. He briefly settles into an energetic phase of beating the drum fast. He watches as I match his beating with strumming the guitar. I bring the song back to the lyrics of the 'Kiwi Rock' chorus which ends with the line, "Lets rock and stop". John stops his playing and hands the drum back to me at the appropriate time.*

Within moments, John gets up and makes his way to a second instrument box I had placed covered and hidden underneath a table in the room. He immediately selects a shaker and starts shaking it vigorously. I verbally encourage him to move back to the chair while I strum the guitar, matching his shaking.

*He stops shaking the shaker and moves out of his seat to rip pictures off of the wall.*

I physically redirect him back to his seat after taking the paper away from him and hold up the visual schedule in front of him. John identifies the next activity - choosing a

song - and is shown two song picture cards. He initially chooses both songs to sing. When prompted again he chooses 'Twinkle Twinkle'.

*Immediately after choosing the card, he moves away from the musical space again to play the circular bells which are on the shelves.*

Accompanying him on the guitar, I match his beating, which is chaotic and alternates between a slow and fast tempo and I sing words describing his playing. John brings the bells back into the musical space.

*It is at this point that the ESW leaves the room briefly. As she returns and walks back past John, he becomes aware of her and immediately prepares the beater by putting it into his right hand and raising it over his head. He aims directly at her and throws it despite being verbally prompted, "John put down". I also attempt to reach him before he throws it but can not reach him in time. The beater hits the wall and not the ESW. John is physically prompted by both the ESW and I to sit down in his seat.*

I move the seat so that he is sitting quite close and directly in front of me. I explain that because he threw the beater, we can not play with the bells again today - instead, we were going to play the guitar and sing.

The visual schedule is disregarded from this point on as I feel John needs to be directed to a structured activity. I encourage John to play the guitar and he does briefly before asking me why he cannot climb into the guitar. He persists with this question and tries to climb up onto me to climb into the guitar.

*When directed back onto his seat he immediately stands up and runs to the computer in the room and rips the keyboard off of the desk.*

When he is seated back down, I introduce the bongo drum – a favoured instrument - that provides John with tactile and aural feedback and a release of energy. We hold it between our chairs on our knees. Our initial play encourages John to hit the drum as hard as he can. He initially uses the lollipop drum beater and although the noise appears to be overpowering for him, he continues to beat the drum. I gently suggest we use our hands and hold out my hand for the beater. After placing it in my hand, John will not let

go despite encouragement from myself and the ESW. The mood is kept light and humorous as we wait for John to release the beater. Finally I suggest he puts it in the box for me, which he immediately does.

*As he moves back to his seat he hits the bongo drum once with his hand before running over to the computer and pulling the keyboard off the computer again.*

To contain John and to help him gain control over his actions, I sit him down and ask him what he wants to do in the session. After mumbling, he says he wants to climb into the guitar. I tell him that this is not possible and would he like to finish music now? He agrees that he would.

*I encourage him to strum the guitar for the 'Goodbye' song. He begins to strum in a steady beat alternating between his left and right hand. This meant he was strumming at both the lower, fuller sounding end of the guitar and high up the fret board near where my left hand changes chords. I changed the pitch of my voice to match where he was strumming - high or low. John laughs and makes excellent eye contact with me whenever he changes his strumming, in anticipation of the change in my voice. He remains engaged in this activity for the final five minutes of the session.*

It is at this point in the research that a meeting between the Head Teacher, the ESW present at all of John's music therapy sessions and I was arranged to discuss John's behaviour in the sessions. His overall manner seemed disorganised and uncontrollable and he no longer took any pleasure in the music. The visual schedule appeared to not have made a difference to John's approach to the music sessions and it was decided that elements of the schedule would remain in the session through the use of song and instrument cards. It was decided that the music therapy session was the best place to allow John to express his frustration and the best place to provide a calm quiet place where he was simply allowed to 'be'. The sessions would not place any demands on John initially. It was envisioned that by providing John with a place where he dictated the levels of the session (ie volume, intensity, energy), he would again have something to look forward to in his week. The classroom at the Special Education Unit is a noisy



vibrant environment that appeared to sometimes be too stimulating for John. The sessions would provide a quieter environment for John.

#### *4.1.3. Session Three*

The overall aim of this session was to provide a secure, non-demanding positive environment for John. He had had a particularly unsettled week and was both lethargic and irritable. After discussion with both the Head Teacher and my music therapy supervisor, it was decided that John's favourite activity of listening to 'Love to Sing' would form the basis of this week's session. 'Love to Sing' is a CD specifically designed for children. A book is provided with the CD that contains the words of the songs so that children can follow along.

The music space is in a different corner of the room this week because of the power outlet for the stereo. The stereo sits on a table with several small percussion instruments including a small rain stick, maraca, castanet and small hand drum.

John enters the room and is initially talkative, asking me questions that are unrelated to the listening activity. After being seated, I explain to John he can sing or play the instruments whenever he wants while the music is on. John is eager to press the buttons on the stereo and is easily directed to press Play.

Initially John sings along with the 'Hello' song that begins the CD. The song lyrics are "hello everybody" in many different languages. John attempts to sing along with most of the song and waits patiently listening during the musical interludes. When the next song begins, he reaches out to press all of the buttons on the stereo. He indicates that he would like the first song again but when it is played, he reaches out to press the buttons again. I direct him to look at the book and ask if he would like the 'Pohutukawa Tree' song that the book is open at. He agrees to this song.

He reaches out for the rain stick and investigates playing this loudly and softly while the CD plays.

*With this in his hand he stands up and attempts to open the door that is next to the table.*

He returns to his seat after one verbal instruction from me. I continue to encourage him to sing with me and the CD, but he says he does not wish to sing anymore. I accompany his shaking the rain stick by beating quietly on the hand drum and let the CD continue through its songs.

*Ten minutes into the session, John begins to show signs of being tired by rubbing his eyes and resting his head on the table. When one song ends and it is time to turn the page, John does not lift his head off the book. I press the stop button and immediately John lifts his head up and turns the page. Once the music begins again, he puts his head back down upon his hands (still holding the small rain stick) on the tabletop. While not directly engaging with the music, John is listening to it and wants to continue to listen to it.*

John remains quiet for five minutes. Suddenly he becomes animated and asks questions unrelated to the activity we have been doing. I indicate that it is time to finish the session as it is almost changeover time to the next activity.

*John is eager to strum the guitar again for the 'Goodbye' song. He varies his strumming as he did in the last session, playing up and down the neck of the guitar. He laughs almost continuously at the changing dynamics of my voice and makes excellent eye contact with me throughout the song. He sings "goodbye" at the appropriate time in the song and appears satisfied when both the song and session end.*

#### **4.1.4. Session Four**

During the last week leading up to this session, John has often displayed inappropriate throwing behaviour. The Head Teacher brings to my attention that John may be throwing objects in order to seek the attention of the adults around him.

Therefore, this session would contain both a listening component (an activity that has been positive for John) and action songs (to encourage interaction and participation). The aim for the session is to engage John in more activities in the music session and to have him complete at least one activity other than the 'Goodbye song' (complete all the actions to one song or sing along with one song).

John is tired, often yawning through the session. He sings along in the 'Hello' song, even singing the ESW's name but he does not make eye contact with her while he is doing this. I offer for him to play the guitar and he is eager to participate. He suggests we play 'Row Row Row' and we explore singing loudly and softly and match his strumming to the dynamics. John also alternates strumming high and low on the guitar neck and looks expectantly at me to begin singing in a similar style to the 'Goodbye' song. I sing in this style until the end of the song.

John participates in the next two action songs by doing the correct actions with me. In the third activity he plays the rain stick quietly and loudly in correct specific places. His attention moves to the piece of paper I have written the session plan on and asks what it says. With encouragement he reads it out to me and is eager to sing the songs ('Miss Polly Had a Dolly' and 'I'm a Little Teapot') with me. We have not sung these songs in a session before.

*After this, I offer John the choice of singing or listening to the CD. John chooses to listen to 'Love to Sing' for the next activity. He does not sing along but follows the words closely with his finger.*

He is eager to choose a song and be directed as to which buttons to push to get to that song. He listens to five songs before his attention wanders to other topics of discussion and we move back to the other music space.

John focuses on the tambourine music activity not needing any prompting to follow the song lyrics on how and where to play the tambourine. As the song comes to a close he begins to talk about travelling to China and says that he is hungry. We briefly discuss ways in which he could get to China, before singing the 'Goodbye' song. John sings 'goodbye' in the appropriate place before leaning forward to rest his head on his knees with his eyes covered with his hands.

#### **4.1.5. Session Five**

For the final session I decide to reintroduce the visual schedule. John had shown an interest in the list of activities during the last session and I wanted to take advantage of this interest. His participation and co-operation within the last two music therapy

sessions had increased which could mean that he was enjoying himself more within the session. His energy had been visibly low during the last few music therapy sessions, but leading into this week his energy levels appeared to have increased.

As John appears to be in a positive frame of mind, I make the decision to display more instruments for him to choose from. I also aim to include the ESW on more of the musical activities and ask her to join in the action songs instead of taking a step back from the musical space.

The visual schedule is used to direct the first four activities of the music therapy session. John sings the 'Good Morning' song and does not need prompting to sing to the ESW present at the session. He briefly makes eye contact with her as he sings 'good morning' to her.

*We move to a glockenspiel activity in which John begins to beat the glockenspiel extremely hard and loudly.*

I improvise a song about playing loudly and playing softly to encourage John to vary his beating.

*John raises the beater above his head as we begin another loud section of the song and I verbally warn him to "put down please!" and he follows the instructions without delay.*

I demonstrate playing softly when the lyrics of the song mention it and John follows this lead. We move back to playing softly to end the song.

As John appears to want to play something loudly, I suggest we play the bongo drum and tell him that he is allowed to beat this instrument loudly. John's symbolic play on the bongo drum is imaginative but consistent to the suggestions he has made before. He associates loud banging to a giant walking, scratching to mice living inside the drum and quiet knocking to the sound of a horse walking across a bridge.

John suggests the ESW play along with us while we are playing the drum. He chooses an instrument for her to play while he and I continue to play the bongo drum. I improvise a song describing how we can all play together and how much fun it is. John

smiles often during this song and makes significant eye contact with both the ESW and I.

*John moves out of the musical space several times during this activity but is easily verbally prompted back into the space to continue with the activity at hand.*

John shows interest in the guitar so I encourage him to strum it for the next activity. He laughs often as he tries to invent new ways of playing the guitar that force me to change how I am singing. He 'plays' the tuning pegs and below the bridge of the guitar. He includes loud and soft dynamics in his strumming, laughing when I follow these dynamics with my voice.

*Because of time restrictions, the improvisation moves into the 'Goodbye' song. John sings along with me and initiates singing "goodbye" to the ESW.*

## **4.2. Case Material 'John' - Summary**

### ***4.2.1. Inclusion Moments***

John often initiated direct social interaction with the ESW or I through verbal communication. In Session Four, he chose to participate in musical activities and remained attentive during these activities.

John used a direct way to initiate social interaction with me and/or ESW. He initiated a turn taking game with me when we were both were playing instruments.

John was an active participant in an improvised song and an improvised game by copying my own vocalisations.

I aimed to provide musical support and structure for John's drum beating during Session Two and allowed him to lead a musical activity (strumming the guitar).

#### *4.2.2. Exclusion Moments*

John's exclusion moments were often behaviours that could be seen as disobedient behaviours – things he should be aware are disobedient. His withdrawal from social interaction during Session Three was most likely because he was tired and unwell and may have needed time out from a demanding environment. John also purposefully removed himself from the musical space several times during the data collection period. During this time he would not make eye contact with me or the ESW.

John sometimes disregarded the instruments in a way that could have led to them being broken. This disregard appeared to be a way to a) communicate he had finished with the instrument; or b) explore different ways of playing the instruments.

Sometimes I provided structured exclusion for John by providing non-demanding activities including a listening activity.

#### *4.2.3. Discussion*

John began to enjoy the music therapy sessions at the end of the data collection period. He was provided with a space where he could loudly beat a suitable object and expend energy that could alternatively have been directed into throwing an object.

The music therapy session offered a period of relief from the noisy classroom in a quiet, non-demanding environment. It is possible an experienced music therapist may have had greater success using music to aid John in redirecting his energy in a positive way.

### **4.3. Case Material For ‘Michaela’**

Michaela is a six year old girl diagnosed with autism. Her gross motor skills have developed normally and she often skips and dances. Her language is severely delayed and her vocabulary is limited. She shows good articulation but her language is mostly used in a self stimulatory delayed echolalia mode. Occasionally she will immediately echo a word or phrase. Michaela is capable of good functional looking and listening but will sing and interrupt and distract herself from the communication. Her social behaviours are egocentric and she will often stare off into the distance. Michaela expresses displeasure through squealing and expresses enjoyment by laughing and giggling.

Michaela’s receptive language is delayed but she will follow direct one step instructions. She is generally compliant but has no desire to please other people. She will complete most tasks with a minimum amount of effort before returning to self stimulatory routines. Her attention span depends on her interest in the activity.

Michaela often sings or hums nursery rhymes or songs that she knows or has heard. She is very responsive to rhythmic characteristics of music and is readily able to tap out the rhythm of a lyric line. Michaela’s connection to music made her an obvious referral candidate for music therapy. She had also given a positive response to previous music therapy sessions she attended with another music therapist, conducted separately to this work. Before this project began, Michaela had been attending both group and individual music therapy sessions at the Special Education Unit during the school terms for nine months. She normally attends music therapy with the same ESW each week.

Michaela’s IEP long term goals concentrated on encouraging Michaela to initiate communication with her peers and adults around her in the school environment. It also highlighted encouraging Michaela to appropriately and effectively communicate feelings and ideas in a variety of social contexts.

Michaela’s long term music therapy goals are as follows:

- encourage Michaela’s social interaction

- increase Michaela's flexibility

#### *4.3.1. Session One*

The aim for this specific session was to engage Michaela for a significant period of the session.

As soon as Michaela is seated, she reaches out for the guitar I am holding and looks up expectantly at my face. During most of the 'Good Morning' song she holds eye contact with me before suddenly she turns her back on me. I pause in my singing until the ESW prompts Michaela to turn back around. I suggest, "Michaela's turn!", while holding the guitar out for her to strum and continuing to sing the 'Good Morning' song.

Michaela begins vocalising nonsense words while strumming the guitar to the rhythm of her own singing. I mimic her singing and tapping and she responded by making eye contact and increasing her vocalisations. She smiles and turns her head from side to side while vocalising, "duc-ki, duc-ki, duc-ki".

*She leaves her hands on the guitar which I am holding. [This gesture felt like a maintained connection between both of us].*

Her vocalisations become melodic, often sliding down the last three notes of a scale.

*She becomes absorbed in her own words, turning her head away from me and looking at the wall but keeps one hand on the strings of the guitar.*

I repeat her vocalisations back to her in a questioning tone, which makes her smile and briefly glance at me. I attempt to engage her with me by facilitating her hand to strum the guitar. She pulls her hand away before turning back to explore the strings in her own way. She pushes her face up close to the strings and tries to put her fingers underneath them.

*I begin to sing the words 'Michaela plays the guitar' to a familiar nursery rhyme tune (Farmer in the Dell). Immediately Michaela makes a low guttural sound and puts her fingers in her ears.*



I persist in my singing of the song, becoming stronger and more direct with the words. After prompting her to put her hands down, she joins me by singing her name at the beginning of the lyric line. She maintains eye contact for the rest of the song and when I finish singing, I offer her the wave drum to play with. She explores it briefly before placing it back on the ground.

*I prompt her to choose another instrument, by singing and gesturing to the instruments. Her vocalisations become guttural again and she turns away from me. As I sing, “Choose an instrument Michaela, choose an instrument”, she takes hold of my hand and makes an attempt to turn my body away from the instruments. She interrupts my singing by clearly saying, “Tinky winky” and taking hold of both my hands. Each time I attempt to pick up an instrument, she moves in front of me or tries to take my hand.*

Meanwhile she continues to vocalise. As I pick the wave drum up again she starts saying, “ah ah ah ah”. [It reminds me of when a mother says “uh ahh” to their child to indicate that a ‘no no’ or something they should not be doing]. Michaela chooses a small clear shaker when I offer her two instruments to choose between. She starts tapping it in her hands and I mimic her shaking pattern on the guitar with my strumming.

*She turns to look at me when I change my song lyrics (which had been “Rebecca plays the guitar”) to “Michaela plays the shaker”. As I slowly sing through this song, she sits quietly looking at various things around the room but does not vocalise. I wait for her to turn to me before I sing again, “Rebecca plays the guitar”. When I pause for a moment, she begins to softly vocalise and reaches out to the guitar. As she strums I change the lyrics to “Michaela plays the guitar”. I hold on the first syllable of her name and she finishes singing her name. She does this twice during this song.*

We move onto an action song, ‘Head Shoulders Knees and Toes’. During this song Michaela remains focussed, singing the word ‘toes’ each time. The ESW provides some assistance for Michaela to do the actions. Michaela follows along to ‘Open Shut Them’ for some of the song. She sings the correct word when I pause for her to finish the lyric line.

Michaela begins to constantly say “Tinky winky” so I sing the Teletubbies song for her. I attempt to clap along but Michaela holds onto my hands to prevent me from clapping. She moves from the chair onto my lap then back to the chair as her vocalisations grow louder. I begin to sing a chant that she liked during a previous session but this causes her to place her fingers in her ears and vocalise a crying sound.

*We sit in silence and after waiting for a brief period, Michaela clearly sings, “Old MacDonald had a farm”. I strum gently on the guitar and join in singing with her. She clearly sings, “On that farm he had some cows”, in the correct part of the song.*

She removes my strumming hand from the guitar but appears to not want the song to stop. After I replace my hand on the strings, Michaela begins to show signs of being upset. She rubs tears from her eyes, vocalising a quiet wail.

*I put down the guitar and she takes my hands and places them together while her vocalisations increase. She finally places her head in my lap as I comfort her, telling her that it is time to finish music now. As I start to sing the ‘Goodbye’ song, she lifts her head up and wipes the tears from her eyes. She moves to me for a hug while I finish the song and in the correct place, she sings the word ‘goodbye’.*

She continues to cry once the session is over. After discussion with the ESW, we were unsure why Michaela began to cry or what set it off. She did not appear to be hurt or to be distressed, just sad about something. We were unable to connect it to anything specific in the music session.

#### **4.3.2. Session Two**

The aim of this session remained as trying to engage Michaela directly in a musical activity and to sustain her concentration for an entire song.

After entering the room, Michaela immediately sits down in the chair and quietly waits for me to begin the ‘Hello’ song. After playing this to her, she restricts my playing by holding onto my hand. She continues to strum and explore the instrument with her other hand. When she tires of this, I offer her the hand drum. She immediately replaces it

calmly back on the ground. [This is a change from her normal response which is to throw the instruments back onto the floor].

*She vocalises often during this music therapy session. The only recognisable tune was 'Three Blind Mice' which she occasionally allows me to join in singing with her. She begins to vocalise the word "maa-kaa". I mimic her and begin playing the guitar. As I improvise a new song, "Michaela can sing ... maa-kaa!" Michaela smiles and laughs, looking directly at me and sustaining her eye contact. She joins in the song, singing "maa-kaa" in the appropriate place on two occasions. I pause at "maa-kaa" causing her to face me, smile and say "maa-kaa". This cause and effect game lasts for several times through the verse. Each time, Michaela looks away from me, I pause in my singing, causing her to turn to me, make eye contact and sing the word, "maa-kaa".*

As she tires of this game I attempt to sing pre-composed nursery rhymes which cause her to place her fingers in her ears and sing louder to herself. Both the ESW and I direct her, "Michaela, hands down!" to discourage this habit. I stop singing nursery rhymes and continue to explore vocalising with Michaela.

Michaela sits facing me, attentive to my singing. I begin tapping the rhythm of her singing on my knees and she put her hands underneath mine attempting to stop me tapping. She continues to softly vocalise during this time. She appears calm and happy to be with me. As she sings I hum along with her but she does not turn her head to look at me.

*When I sing louder, Michaela takes her hands and places them over her ears.*

Our session is interrupted by other students and we are forced to end early.

#### **4.3.3. Session Three**

In this session, while the main goals remain the same, I also want to engage Michaela in a turn-taking activity. This session, a different ESW attends music with Michaela. This does not seem to influence the session in any obvious way.

Michaela is attentive throughout the 'Good Morning' song and makes excellent eye contact with me as I sing to her. She vocalises a word reminiscent of 'Good morning' after I finish the song.

I verbally encourage Michaela to play the guitar, but she does not respond and continues to look out the window at the playground. I prompt her by saying, "we are going to sing Michaela!" and begin to sing 'Twinkle Twinkle Little Star'. She becomes excited, turns to face me and stands up to be closer to my face. She sits back down and remains silent as I continue to sing. She does not fill in any of the pauses that I leave in the lyric line.

I decide that an action song may encourage Michaela to participate and begin 'Open Shut Them' – a favourite song of Michaela. Michaela initially sings 'clap' and 'lap' in the appropriate places but loses interest quickly.

*During the rest of the song, she places her fingers in her ears and begins a low guttural sound to block out my singing.*

After prompting her to put her hands down, I finish the song but Michaela appears disinterested. I begin to sing a new song 'Miss Polly Had a Dolly' and Michaela sits quietly listening.

*As I move through the actions of the song, she grabs my hands and places them over her ears.*

Despite the clear communication she does not want me to sing, I finish the song before asking Michaela, "What song?" As Michaela does not respond for some time, I offer her the hand drum. She carefully places it back on the floor in the exact same place I picked it up from. While she makes her way back to her chair she begins vocalising an unrecognisable tune. I sit quietly listening but her singing fades and she silently stares out the window for a short period of time.

*I attempt to vocally improvise another song but Michaela covers her ears and removes herself from the musical space to the other side of the room.*

*After leading her back to her chair, I ask, “What song Michaela?” She begins to sing ‘Old MacDonald’. As I join her on the guitar, she once again places her fingers in her ears. After being directed to put her hands down, she sits facing me and appears to listen until I finish singing the song. She begins to sing again and makes direct eye contact with me.*

At this time the session is interrupted by three adults. They enter the classroom without asking permission or consultation. They remain near the door, where Michaela can not see them, but can hear them. I do not acknowledge the adults and continue to play and sing to Michaela – who has become restless in her seat. The adults stay for approximately three minutes, talking the entire time.

*Michaela becomes interested in the sounds the adults are making and stands up, moving towards the adults.*

I direct her back to her seat and she keeps her fingers in her ears while singing ‘Old MacDonald’. I accompany her, singing and vocalising on the guitar and occasionally mimicking her vocalisations back to her. She becomes excited, turning to make eye contact and facilitating my hands to clap. I continue to clap along with her, changing the action to tapping on our knees. I begin to sing ‘My body’ – a song that is used in another group music session - but Michaela quickly loses interest in the song although she does not place her fingers in her ears while I am singing it.

*Once I finish, Michaela starts to laugh and dances while holding onto my hands. She begins to sing ‘Old MacDonald’ and clap my hands again. During this part of the session, Michaela and I are directly engaged through touch and singing. She sings the word ‘chicken’ in ‘Old MacDonald’ – a change from ‘cow’ which she normally sings.*

In order to stop ‘Old MacDonald’ becoming an obsession, I decide to introduce the song ‘Head Shoulders Knees and Toes’. Michaela watches me do the actions but only sings the word ‘toes’ once during the chant.

*Once finished, I introduce another instrument to her but she places it on the ground and moves away from the musical space.*

This turns into a 'catch' game as the ESW and I attempt to bring Michaela back to the musical space to finish the session with the 'Goodbye' song. When I sing, "Goodbye Michaela", she immediately echoes this back to me.

#### **4.3.4. Session Four**

Another aim of this session was to discourage Michaela from placing her fingers over her ears. Michaela enters the room and is directed to her seat and immediately puts her fingers in her ears, despite the fact I had not started singing.

*Often during this session, Michaela chooses not to be part of the music. While she is offered a variety of instruments including the hand drum, lollipop drum, shaker and rain stick (all of which she has previously shown an interest in, during other sessions) she replaces all of these back onto the floor in front of her.*

The ESW and I are firm with Michaela by physically prompting her to put her hands down. I focus the session around action songs to encourage Michaela to use her hands for something else. Some of the time she participates otherwise she places her fingers in her ears and vocalises loudly.

During the song 'My Body', she persistently places her fingers in her ears. When we sing, "If You're Happy and You Know It", she listens and watches our actions, but she does not participate.

*Midway through the 15 minute session, Michaela begins to hum an unrecognisable tune before making a "maa-baa" sound. I mimic this and Michaela indicates an interest in what I've done by turning to me. I sit silently as she watches me. She repeats the sound and when I do not repeat it, she reaches up to touch my cheek. As she touches it, I say 'maa-kaa'. Michaela laughs and the game repeats itself. This 'cause and effect' game lasts for three minutes before she moves on.*

Michaela begins to hum again and disregard any songs I sing for her. I accompany her vocalising with the guitar, following both the rhythm and pitch of her singing.

*This does not elicit any response from Michaela and she remains staring out the window at the playground. Despite playing a variety of instruments and singing directly to Michaela, she remains staring out the window, sometimes vocalising to herself.*

The ESW verbally and physically directs Michaela back to the session for the 'Goodbye song'.

#### **4.4. Case Material 'Michaela' - Summary**

##### ***4.4.1. Inclusion Moments***

Michaela's interaction was often indirect, through song or vocalisations. She also would initiate physical contact with me. These inclusion moments were not always accompanied by direct eye contact. On two occasions, Michaela initiated social interaction through vocalising a nonsense word. She also initiated singing the pre-composed song, 'Old MacDonald'.

Michaela followed musical hints or pauses in familiar pre-composed songs and improvised songs on three occasions. Michaela also followed my verbal prompts to finish singing her own name.

Michaela left her hands on the guitar while I was playing it. This formed a physical connection between us and Michaela's silence suggested that she was listening to the music I was playing.

I provided musical structure for Michaela's vocalisations to encourage social interaction.

##### ***4.4.2. Exclusion Moments***

Michaela used several techniques to restrict both social and musical interaction between her and me. She removed herself from the musical space, covered her ears and sang loudly and physically attempted to stop me from playing the instruments.

On several occasions, Michaela displayed egocentric moments of withdrawal typical for children with autism, where she become absorbed in her own vocalisations or stared out the window for an extended period of time.

#### *4.4.3. Discussion*

Michaela most often tried to exclude herself from the music therapy session. She placed her fingers in her ears and vocalised louder; removed herself from the musical space; would avoid eye contact with me and would throw or put down the instruments when offered to her. She also chose to be included in the music session. This is shown by her engagement in vocal play with me; involvement in an improvised song; remaining seated for the entire session; and when she made direct and intentional eye contact with me or ESW.

### **4.5. Case Material For ‘Tom’**

Tom is a six year old boy diagnosed with autism. His gross and fine motor skills are age appropriate and he will dance and skip around the room when he is happy (his parents refer to this as his ‘happy dance’). Tom is verbal with limited language and both immediate and delayed echolalia language. He enjoys exploring making different sounds with his mouth and will often laugh if an adult mimics the sound he is making. He often watches other people’s mouths while they are talking. He has a good understanding of language but is willing to wait a long time if he does not want to complete an activity. He prefers to lead a joint attention activity. Tom is independent in activities and is good at attending and concentrating on an activity.

In social situations, Tom will initially stand back from the action to observe what is happening before choosing whether or not to be part of it. Tom will seek out other children or adults but mostly enjoys independent solitary play.

If Tom is very excited about something, he will sometimes reach out to pinch a person’s face. He will also exhibit this behaviour when he is talking to someone and finds it amusing. If he is upset with somebody or about something, he will attempt to slap the person’s face or pinch very hard. This behaviour is not socially acceptable even though it is an effective form of communication.



Tom's interest and fascination with vocal sound was initially the reason why he was referred to music therapy. Tom's music therapy goals were developed after the initial music therapy assessment sessions, from his Individual Education Plan (IEP) and from discussion with the Head Teacher. The IEP areas of development included communication, self expression and social interaction. The music therapy goals and objectives for Tom were as follows:

- develop social interaction skills
- develop communication of needs
- increase functional communication

The music therapy sessions also aimed to provide an environment for Tom's vocal play to be encouraged and developed.

#### *4.5.1. Session One*

Tom enters the room and is directed to sit on the chair. As I sing the 'Good Afternoon' song, Tom shakes his head and vocalises the sound 'noooooh'. He watches and smiles at the ESW who is dancing to the music in her chair. As the song ends, he jumps up and sits straight back down. He appears excited as he taps his hands on the chair and I match my strumming to his tapping. He watches me as I begin to sing 'Andy Pandy', a chant about jumping up. The chant is written so that it is easy to pause before the 'up' and allow the child to complete the action and word: "Andy Pandy, fine and dandy, all jump up!"

Tom leans forward in his chair in preparation and laughs as I complete the chant by jumping off my chair.

*As I repeat the song, Tom readies himself in his chair and after a five second pause at 'all jump ...' he jumps up and lets out a loud vocalisation, "Paarrrrpppppp". He settles back into his chair and looks away from me as I begin the chant again. As I get to 'all jump ...' he turns towards me and after a four second pause, yells "Paaarrrrpppp" twice while hitting his hands on his legs. He turns away from me and he*

*sighs when I pause at 'all jump' and after a second verbal prompting "all jump ..." he says, "parp-parp-pap-pap-parp" while still looking out the window. I repeat his vocalisation back to him in a questioning tone but he does not turn to look at me.*

After a silent moment, I sing for him to choose an instrument, pointing with my hand to the instruments that lay in front of him. He continues to look out the window. His eyes briefly turn to me while I sing the prompt a second time, and he vocalises "Ahhh" as I tap him on the knee. After several more prompts, Tom gets up and picks up the woodblock (he rarely chooses an instrument when prompted).

He begins to explore the woodblock, pressing the beater in the holes. As he draws the beater up over the woodblock, it croaks like a frog. I begin to sing 'Galoop' (a familiar song about frogs) and Tom places the woodblock on the ground. As he sits and listens to me sing, he plays the woodblock on the floor. When the song finishes, he picks it up and presses the beater into the hole.

As I begin the song again, he makes a high pitched vocalisation as he plays. On the line, "and his eyes went galoop galoop galoop", Tom begins the high pitched vocalisations again. He pauses in his playing and begins the correct scraping action and I sing this line again. He stands up while continuing to scrape the woodblock and make high pitched vocalisations.

*I pause before the final 'galoop', and Tom looks up at me. He claps his hands towards me as if to encourage me to continue singing. From this, a turn-taking clapping game commences. Tom claps twice, waits for me to clap, then scrapes the woodblock. This happens three times in a row.*

Tom begins to tap the woodblock with the stick. I match his tapping on the back of the guitar and he makes extended eye contact with me. He stops tapping and shakes his head from side to side, then up and down. He moves to the other side of the guitar and begins plucking and strumming the strings.

*As he strums, I sing, "Tom plays the guitar". His strumming increases and he vocalises the same high pitched sound as before. He claps, pauses for me to clap then strums the*

*guitar again. This happens three times. He turns as if going to pick up the woodblock, but decides against it and moves back to the guitar.*

After this, Tom notices something on his hand and becomes focussed on this. I put the guitar down and pick up the glockenspiel and Tom grabs hold of the guitar (he is standing). He slowly picks different strings, with four second intervals in between. He sits down again while still intermittently strumming the guitar. With his hand muting the strings, I strum across them with a slow steady beat. He hands the guitar back to me to hold. He grabs the strings in his fist and pulls them upwards. I sing, "Careful!" but he repeats the action so I sing, "Careful!" louder still. This is a two note melody which is a minor third fall (A natural melodic fall found in many children's play songs including 'King of the Castle'). He turns the guitar over and tries to strum down the back of it. As this is unsuccessful, he reaches for the strings again. As he grabs them, I sing, "Careful!" to him and remove his hand. His eye contact with me is purposeful. As he continues to try and pull the strings up, I sing "careful!" and begin to pluck the strings. As I pluck them loudly, Tom says, "careful!" with the same falling minor third melody.

*Tom looks at his finger as if it hurts from plucking the strings but he makes no other sign that he is hurt. Fifteen seconds later, he looks up from the guitar and begins a high pitched squeal which conveys discomfort. I match his vocalisation and turn it into "Oh Dear What Can the Matter Be?" Tom reacts by squealing louder and reaching out with both hands to hit my face. The ESW and I sit him back down and talk softly and calmly to him. He begins a crying sound and whacks out at the guitar several times. He cries out again and looks at his hand.*

As I put the guitar down and say, "Tom we are finished now", he begins to laugh. He alternates between attempted crying and laughter as I place the lollipop drum in front of him to distract him from his hand.

As he does not take any interest in it, I make the decision to finish the session.

#### 4.5.2. Session Two

Previous to this session, Tom has been extremely upset and crying for about forty minutes with brief periods of calm. The main aim of this session was to enable Tom to express how he was feeling, and to provide an 'escape' from whatever may be upsetting him in the classroom.

After the 'Good Afternoon' song, I offer Tom the glockenspiel to play. He takes the beater from me and hits random notes on the glockenspiel. When he is satisfied, he hands the beater back to me. I play briefly before motioning for him to take the beater. He takes it and beats the glockenspiel in the same random manner. During this time he is both crying and laughing.

*He pushes the glockenspiel away so I offer him the lollipop drum. He throws this down on the floor.*

At this point, he is still showing signs of distress (attempted crying) but these are significantly reduced from his initial distress at the beginning of the session.

I pick up the guitar and Tom immediately begins to strum it, looking sideways at me as he grabs all the strings and pulls them up (as in the previous session). I sing, "Careful!" and direct his hand back down so the strings are not stretched.

*He sings, "seen the muffin man" and continues to strum the guitar. When I sing this song back to him, he begins to smile. As I continue to sing, he makes a motion to smack my face in an affectionate way. Holding his hands down, I continue singing but direct his energy into tapping his knees instead.*

As I let go, he jumps off his chair and moves into the large floor space behind our three chairs to do his 'happy dance'. While laughing, he leaps up and down, skips around and then rolls on the ground. I accompany his movements on the guitar, following the tempo, intensity and dynamic of his movements.

*Tom increases the amount of pauses in his dancing, waiting two to three seconds before continuing his movements. He laughs as the guitar matches these pauses.*

I put down the guitar and join him dancing, mimicking his action sequences and his vocalisations. After three minutes of free dance, I begin to structure our actions, introducing the song, 'Andy Pandy' to encourage Tom to join my dancing. Tom watches me carefully as I sing the song and leap up from the floor at the correct time. After the fourth time, Tom jumps up at the correct time in the song. On this occasion he yells, "parp!" as well.

Unfortunately, the bell for activity change-over rings after this vocalisation and we are forced to end the session.

#### *4.5.3. Session Three*

Tom enters the room making a siren-like vocalisation. He immediately begins pulling on the strings of the guitar. After a loud strum, I begin to sing the 'Good Afternoon' song. He reaches out to strum the guitar when I pause in my singing and also vocalises on one occasion. He concentrates on the strings of the guitar for an extended period of time, strumming and plucking them with a high energy level. Slowly calm descends on Tom and he starts mouthing an 'oo' sound. I mimic him and he makes a movement with his hand, pointing up. I copy this action but he does not repeat it.

I move the guitar away and pointing to the instruments I sing, "Choose an instrument Tom, choose an instrument". He shakes his head, first in a sign of no, then yes and moves over to the small wave drum. To discourage him from pressing on it, I hand him a beater and keep a beater myself. A turn taking game ensues where I mimic how many beats Tom plays on the drum. These are very steady fast beats, mostly occurring in groups of three.

Tom becomes interested in watching the beads jump as he hits the drum and he begins to extend his beats to groups of nine or ten. He varies the dynamic of his beating.

*Intermittently he turns the drum over and shakes it. He throws it onto the ground, and I demonstrate putting it carefully onto the ground. He squeals and turns it back over. This is the only verbal noise during this ten minute period.*

I begin to play the circular bells; matching Tom's beating with an improvised melody. For ten seconds, Tom and I are playing alternating beats.

*He then beats the drum loud and fast and I have to stop him, so as not to break the drum.*

He picks the drum up and vocalising a long 'oo' sound, watches the beads move around the drum. He laughs as he shakes it. As the play around the drum continues I introduce a 'shhh' sound, matching his beating. Tom looks up at me as I begin to do this. I beat out a small four beat rhythm including one half-note and Tom includes a faster beat in his turn of playing. Each time Tom picks up the wave drum he produces the same high pitched vocalisation that melodically falls into a laugh.

*I offer Tom a variety of other percussion instruments to play but he remains fixed on the wave drum and watches the beads flow from side to side. I withdraw from playing with Tom and instead begin singing. Tom does not make any acknowledge of this change.*

The song I choose involves the line, "lets rock and stop!" that signals that playing must finished.

I encourage Tom to find the lollipop drum (another favourite instrument) and hold it out in front of him. It is not until the beater is physically placed into his hand that he makes an effort to play the drum.

Tom becomes directive and places my hands in specific places on the drum to hold it. I sing the 'Lollipop Drum' song which Tom joins in on occasionally. Tom beats on the drum irregularly but often watches my mouth to see me sing in time with his beating. He then tries to put his feet on the drum and thinking this is funny, laughs out loud. When I hold the lollipop drum out of reach, he leaps out of his chair, takes it from me and throws it on the floor.

*From here he begins his 'happy' dance, moving around the room leaping and dancing and vocalising, "AH!" in a loud voice. He maintains eye contact with me and laughs when I join in with him.*

He becomes distracted by the play dough box in the corner. Instead of returning him to the seated musical space, we begin the 'Andy Pandy' game in the larger floor space. After demonstrating the game to him, he sings the verse himself. He remains near me and watching me for a few minutes but then runs around the room, creating a game out of being chased.

The ESW and I direct him to sit down again to finish the music therapy session. Tom laughs and squirms in his chair for the entire 'Goodbye' song.

#### **4.5.4. Session Four**

Tom's energy level is high as he enters the session. He sits down for the 'Good Afternoon' song but soon leaves the musical space and dances around the larger floor area behind the chairs.

I had prepared for this (having seen Tom's energy levels in the classroom prior to the music therapy session) and introduce the parachute to the session. Tom is familiar with the parachute as it has been used in previous group music therapy sessions.

The ESW and I hold the parachute out and lift it up high, allowing it to float back down. The song that accompanies this is 'My Lovely Parachute can go up and down'. Tom laughs each time the parachute goes up into the air.

*I begin to pause at the word 'go' until Tom reacts in some way (in this case it was turning on the spot) to make the parachute move upwards. He enjoys this immensely, sometimes appearing to pause and increase the suspense before the parachute goes up. To continue encouraging Tom to match words with actions, we also sing the 'Andy Pandy' song, jumping up from the ground and lifting the parachute high on the "all jump up!" lyric line.*

Tom gets himself tangled up in the parachute as it comes back down. He starts timing his running so that he only just makes it to safety on the other side of the parachute before it comes down.

This play lasts for around ten minutes before Tom's energy level visibly lessens, and we move back to the musical space. I offer him the lollipop drum which he accepts and begins beating immediately. I sing the 'Lollipop Drum' song but inadvertently change the lyrics slightly. Tom immediately stops playing and looks up at me with a concerned look on his face. I continue singing, changing back to the original lyrics and he appears content to keep on beating the drum. He also vocalises with me, singing "na na na na" and "body body body".

I try singing 'My Body' – a song to correspond with his singing the word 'body' – but he does not appear to be interested in it for as soon as I remove my hands from holding the lollipop drum to complete the actions, he directs them back. We create a game of suspense by singing, "Ready? Steady? Go!" before Tom can hit the drum. He repeats the words, only occasionally waiting for the 'go!' before hitting the drum.

During the lollipop drum and glockenspiel improvisation, Tom watches my playing closely, sometimes matching my beats. I accidentally drop my beater on the ground and say, "whoops!" Tom immediately adds, "a-daisy" to the end of my sentence. Both the ESW and I encourage him by saying, "Yes Tom! Whoops-a-daisy."

*At times during the session, Tom is distracted by his tooth which is quite wiggly. He is distracted for about 3 minutes each time before he re-engages with the session. During this time he does not respond to any verbal prompt to play an instrument or to sing.*

*Towards the end of the session, Tom creates a game with the ESW sitting next to him. He sings 'Tom beats on the lollipop drum, at music' while placing his hand in between the two hands of the ESW. He facilitates her tapping on his hands – as if beating on a drum. Tom is absorbed in this game and all his attention is on the ESW. I did not wish to interrupt this moment and sit quietly as the ESW sings along with Tom and follows his requests to tap his hands. This intimate sharing game lasted for around five minutes before Tom's attention is no longer solely focussed on the ESW.*

I begin to play my guitar in time to the rhythm of the ESW's patting and move into the 'Goodbye' song as time restrictions means the session has to end.



#### 4.5.5. Session Five

Tom enters the room and goes to the cardboard box that is sitting in the corner. I direct him to sit down in the musical space by simply tapping the chair and saying, “Music time!” He vocalises something that sounds like ‘knock knock’ and walks over to the chair.

*I begin to sing ‘Good Afternoon’ and Tom turns his head away from me. I pause after ‘Good ...’ in the final lyric line and Tom turns to me and says, “Afternoon” (the correct word that was next in the line).*

As soon as the song has finished he leaves the musical space and runs back over to the box. I physically direct him back to the chair, telling him that we are going to play with the parachute soon. When he is seated, he turns to look out the window. I start playing the glockenspiel which grabs his attention immediately. We take turns drawing our beaters down the glockenspiel and Tom initiates beating the notes in a descending scale.

*After a brief wait, Tom sings the words “We [are] playing on glock .... glock ... spiel”. I praise him and sing the song ‘We Can Play’ while hitting each note descending the scale. Tom is not satisfied when he tries to play it himself and facilitates my hand to the top of the scale to play the song again. He then takes the beater himself and plays steady beats on random notes. I continue to sing the song to encourage his playing. Whenever I pause my singing or playing, Tom presses on my hand to encourage me to keep playing.*

His attention to the game starts to wander and I discontinue the song.

*We sit in silence until Tom begins to sing another song related to the glockenspiel, ‘Building a Tower’.*

I pass him the first key off the glockenspiel to encourage him to continue the song and game. He keeps taking off each of the keys and carefully places them in a stack on his chair. He continues to vocalise the song lyrics and yells, “Aye!” loudly. This game continues until Tom has stacked all the keys. He begins to place them back on the glockenspiel while still singing.

When he finishes, I praise him and remove the glockenspiel from his hands. I replace it with the lollipop drum which causes Tom to yell, “Aye!” loudly and give a large grin. I encourage him by saying, “Tom’s turn” and hold the beater out for him.

*He takes hold of my hand and facilitates us beating on the drum together as he sings the words, ‘Playing on the lollipop drum’. He intermittently takes the beater from me and plays alone while singing, “On the drum, on the drum”. As I move the lollipop drum up high, out to the side and down low, Tom continues to sing and beats on the drum wherever it is held.*

I begin to sing the ‘Lollipop Drum’ song in time with his playing which had become quieter. He becomes silent and traces patterns on the lollipop drum.

*He turns to look out the window and even as the ESW clicks her fingers in front of his face, he does not flinch. For 10 seconds we allow Tom to be with his thoughts before drawing him back into the music session by tapping our knees and singing the song, ‘Andy Pandy’.*

While vocalising an ‘ooo’ sound, Tom gets up and moves to the parachute which is on the floor behind me. He tries to hide under it so we spread it out on the floor and begin ‘My Lovely Parachute’. During this game, Tom makes hand movements to assist the parachute to move upwards and he also creates a similar game to the last session. This time he occasionally allows himself to be caught up in the parachute when it floats back down.

Tom seats himself on the floor during one of the up motions, and the ESW and I bring the parachute down overtop of all three of us. This causes Tom to laugh. After climbing out of this, I pause and ask Tom, “Now what?” He waits five seconds before trying to lift the parachute up by him self.

I prompt him by saying, “Tom say up?” and mouthing the word ‘up’ but he does not copy me. I sing ‘Andy Pandy’ again and as the parachute goes up, Tom throws himself onto the ground underneath it. Tom does not fill in the pause after “all jump ...”. He wraps himself up in the parachute when it comes back down and begins to say “Aye!” loudly. He also vocalises something that sounds like the word money. As it is nearly

the end of the session, we end this activity and move back to the seated musical space. Tom stamps his foot and runs to the computer. He is physically prompted back to the musical space and remains seated for the 'Goodbye Song'.

## **4.6. Case Material 'Tom' - Summary**

### ***4.6.1. Inclusion Moments***

Tom used physical contact to initiate social interaction with myself or the ESW. He created rhythmic games involving clapping and facilitated my own playing of the drum and glockenspiel. On one occasion he initiated social interaction by singing the pre-composed song, 'Muffin Man'.

In Session Five, Tom used verbal communication related to an activity he was doing on four separate occasions – even changing to another song related to the same instrument. He filled in a pause in the lyrics, with the correct word from the song.

Tom showed an awareness of me while he was doing his 'happy dance'. He made prolonged eye contact while dancing and twirling around. He added more pauses to his dancing and laughed when the guitar strumming followed what he was doing. I provided musical support and structure to Tom's 'happy dance' and even participated by dancing with him. I also created a cause and effect game with the parachute to encourage Tom to participate in the activity.

### ***4.6.2. Exclusion Moments***

Tom displayed inappropriate social behaviours including attempts to pinch my face and disregarding the instruments. He removed himself from the musical space to perform his 'happy dance' in several music therapy sessions.

Tom also displayed egocentric moments of withdrawal. He did not respond to having fingers clicked in front of his face while he stared out the window. On another occasion he was distracted by his wiggly tooth and did not respond to my facial expressions or questions.

#### *4.6.3. Discussion*

Tom initiated singing songs from music sessions in the classroom and at home. Tom showed an ability to associate a song with an instrument. The music therapy session provided songs and games involving loud vocalisations – something Tom is fond of making when he is happy. The music session could adapt itself to include his ‘happy dance’ and Tom was able to extend the musical space and remain engaged both myself and the music.

## 5. FINDINGS AND DISCUSSION

All inclusion and exclusion moments were chosen based on the criteria described in the Methodology (*See Chapter Three*). Classification tables for the data were developed by the researcher to provide a clearer picture of the inclusion and exclusion results. The classifications are not exclusive and some moments show elements of more than one category.

For both inclusion and exclusion moments, four categories have been developed to encompass the examples shown in the case material. There are four categories for Inclusion Moments and four categories for Exclusion Moments. In each classification, three of the categories are based around the child's actions or initiatives. The fourth category is for moments that are directed by the music therapy student or ESW in the session.

### **5.1.Evidence of Social Inclusion**

The four categories of Inclusion moments are Client Initiated, Verbal/Vocal Communication, Instrumental Play and Therapist Supported Inclusion. They are characterized by the following criteria:

- Client Initiated: moments where the child initiates social interaction with the music therapy student or ESW (or both) through song, game or action.
- Verbal/Vocal Communication: moments where the child uses vocal or verbal communication that directly relates to an activity.
- Instrumental Play: moments where the child is engaged in the music/in a musical 'conversation'/in a musical activity with the music therapy student or ESW.
- Therapist Supported Inclusion: moments where the therapist and/or ESW support or provide the child with social interaction.

### 5.1.1. Client Initiated Inclusion Moments

**Table 2:** Client Initiated Inclusion Moments

<b>John</b>	<b>Michaela</b>	<b>Tom</b>
<p><i>Session Two:</i> Varied strumming of guitar to promote change in music therapy student's singing.</p>	<p><i>Session One:</i> Left hands on the guitar while music therapy student was playing it.</p> <p>Initiated singing 'Old MacDonald'.</p> <p>Initiated physical contact with the music therapy student.</p>	<p><i>Session One:</i> On two occasions, created a clapping turn taking game with music therapy student.</p>
<p><i>Session Four:</i> Positive inclusive feel to session as John:</p> <p>chose activities when offered</p> <p>attentive and on task behaviour</p> <p>remained in musical space</p>	<p><i>Session Two:</i> Initiates vocalisation "maa-kaa".</p>	<p><i>Session Two:</i> Initiated singing 'Have You Seen the Muffin Man?'</p>
<p><i>Session Five:</i> Suggested ESW play together with himself and music therapy student.</p> <p>Chose the ESW an instrument to play.</p> <p>Suggested singing "goodbye" to the ESW in the 'Goodbye' song.</p>	<p><i>Session Three:</i> Initiates singing 'Old MacDonald'.</p>	<p><i>Session Four:</i> Creates a clapping game with ESW while singing 'Lollipop Drum'.</p>
	<p><i>Session Four:</i> Initiates vocalisation "maa-baa".</p>	<p><i>Session Five:</i> Facilitated the music therapy student playing the lollipop drum and the glockenspiel together with him.</p>

These moments were when the child initiated social interaction with the music therapy student and/or ESW through song, game or action. The child took on the role of leader in the interaction. During John’s fourth session, John was attentive and remained on task. He initiated involving the ESW in musical activities, asking for her to play along and then choosing an instrument for her to play.

Both John and Tom were more direct in their initiated inclusion moments. John used verbal communication to direct musical activities and Tom physically prompted both the music therapy student and the ESW to participate in his improvised games.

Michaela often initiated inclusion moments indirectly through vocalising or singing a song. Indirect or detached social interaction can often be more comfortable for a child with autism (Kluth, 2003). By singing and vocalising, Michaela was able to convey an idea for an activity to the music therapy student.

**5.1.2. Verbal/Vocal Communication Moments**

**Table 3:** Verbal/Vocal Communication Moments

<b>John</b>	<b>Michaela</b>	<b>Tom</b>
<p><i>Session One:</i> Suggested tracing around the instruments and attempted to sing along with an improvised song about the activity.</p> <p>John copied the music therapy student saying “hello” and “is anybody home” progressively louder, into the bongo drum before sitting quietly ‘waiting’ for a response.</p>	<p><i>Session One:</i> Completed singing her name in a musical activity.</p>	<p><i>Session One:</i> Sang the correct word (or form of word) in the pause the music therapy student left in a song.</p>
	<p><i>Session Two:</i> A new song and game was created from the vocalisation “maa-kaa” that Michaela initiated.</p>	<p><i>Session Five:</i> Sang the word ‘afternoon’ in the correct place in the ‘Good Afternoon’ song.</p> <p>Sang the correct words, “we can play on the glockenspiel” after hearing a descending</p>

		<p>scale on the glockenspiel.</p> <p>Initiated singing “Building a Tower Up Up Up” in correlation to the instrument he was playing.</p> <p>Sang ‘Lollipop Drum’ and repeated “on the drum on the drum” while playing on the lollipop drum with the music therapy student.</p>
	<p><i>Session Three:</i>  Michaela sang ‘Old MacDonald’ while laughing and dancing and holding onto the music therapy student’s hands.</p>	

Verbal/vocal communication was used by the children and the music therapy student to facilitate social interaction. Filling in a pause in a song with the correct word shows the child has been listening to the sounds in the environment around them and understands what to do to complete the activity. Singing a song related to the musical activity without prompting shows an ability to associate something non-tangible (a song) with something tangible (an instrument). In Tom’s case, he would also guide the music therapy student’s hand to play the instrument involved in the song he was singing. Singing the correct song with the correct instrument elicited positive feedback from the music therapy student. Perhaps this was an incentive for Tom to sing. Notably, Tom also sang the ‘Lollipop song’ while tapping the ESW’s hands together (not the correct instrument). His earlier singing of this song may have been because he liked the tune or perhaps he thought tapping hands was similar to beating a drum and therefore singing the ‘Lollipop song’ was appropriate. Pasiali (2004) also found anecdotal evidence that children with autism are inclined to follow directions set in song lyrics.



### 5.1.3. Instrumental Play

**Table 4:** Engaged in Music Non-Verbal Moments

<b>John</b>	<b>Michaela</b>	<b>Tom</b>
<i>Session One:</i> Bell and drum improvisation in which a turn taking 'conversation' ensued.	<i>Session One:</i> Left hands on the guitar while music therapy student was playing it.	<i>Session Two:</i> Was aware of the music therapy student while he was doing his 'happy dance' and added longer pauses in his dancing which the guitar followed.
		<i>Session Four:</i> Tom was absorbed for five minutes in a clapping game with the ESW - a clapping game which he initiated.

The researcher noted the small amount of 'Engaged in Music Non Verbal Moments' compared to the 'Verbal/Vocal Inclusion Moments'. In the music therapy sessions, the music therapy student often used simple verbal language to encourage the children to also use their voices in activities and songs. As all three children are able to vocalise, their music therapy goals were focused on promoting the verbal communication skills the children do possess and encouraging their development. This reflects Kaplan and Steele's (2005) finding that the area of language and communication development was often the main focus of music therapy goals for children with autism.

An awareness of other is an important aspect of social interaction. Brown (2002) highlighted that an understanding between fantasy and reality aides the development of mutual relationships. John and Tom showed an awareness of the music therapy student by providing space for her to play her instrument (drum or guitar) in the improvisation. Michaela shared the music by leaving her hands on the guitar while the music therapy student was playing. This left a physical connection between them and Michaela's silence suggested that she was listening to the music the therapist was playing.

### 5.1.4. Therapist Supported Inclusion

**Table 5:** Therapist Supported Inclusion Moments

<b>John</b>	<b>Michaela</b>	<b>Tom</b>
<p><i>Session One:</i> The music therapy student creates a game out of speaking progressively louder into the bongo drum.</p>	<p><i>Session Two:</i> The music therapy student improvised a song for Michaela's vocalisation and added pauses to her singing to encourage Michaela to participate.</p>	<p><i>Session Two:</i> The music therapy student accompanied Tom's dance movements on the guitar and followed the pauses Tom added to his dance style.</p>
<p><i>Session Two:</i> The music therapy student provided musical support for John when he was playing in a song and also improvising.</p> <p>She contained his beating and provided a structured ending to his energetic playing.</p> <p>The music therapy student changed the pitch of her voice to follow John's strumming on the guitar.</p>	<p><i>Session Three:</i> The music therapy student sings songs to which Michaela responded positively.</p>	<p><i>Session Three:</i> The music therapy student sings 'Lollipop Drum' in time with Tom's beating and then joins in with his happy dance when he suddenly begins to dance.</p>
<p><i>Session Three:</i> The music therapy student encouraged John to strum the guitar for the 'Goodbye' song. She changed the pitch of her voice to follow John's strumming.</p>	<p><i>Session Four:</i> The music therapy student creates a 'cause and effect' game out of a vocalisation initiated by Michaela.</p>	<p><i>Session Four:</i> The music therapy student paused at the word 'go' to encourage a reaction from Tom before the parachute would go up in the air.</p>
		<p><i>Session Five:</i> The music therapy student provided a parachute activity as this activity was well received by Tom during his previous session.</p>

The music therapy student was able to support inclusion through various methods. She provided musical support and structure for Tom's dance movements and for John's beating on the drum during Session Two. She supported client initiated moments by

providing a musical structure for vocalisations (Michaela), participating in movement activities (Tom's happy dance), and allowing the child to lead the musical activity (John strumming the guitar). Sherratt (2001) stresses the importance of play opportunities for a child with autism as they receive fewer opportunities for play than children without autism. The music therapy student also provided activities within the session that encouraged social interaction from the children. The parachute activity included a cause and effect element – Tom needed to react in some way before the music therapy student and ESW would lift the parachute up. This type of play opportunity can aid the development of other socio-cognitive abilities.

## **5.2.Exclusion Moments**

The four categories of Exclusion moments are Inappropriate Social Behaviours, Purposeful Removal From Musical Space, Withdrawal and Therapist Supported Exclusion. They are characterized by the following criteria:

- Inappropriate Social Behaviour: moments when the child displays a socially inappropriate behaviour.
- Purposeful Removal from Musical and Social Interaction: moments when the child purposely removes themselves from musical and/or social interaction.
- Withdrawal: moments when the child appears to slip into their own reality without any obvious intention.
- Therapist Supported Exclusion: moments where the therapist and/or ESW support the child to be excluded from interaction and/or the current environment.

### 5.2.1. Inappropriate Social Behaviour

**Table 6:** Inappropriate Social Behaviour

<b>John</b>	<b>Michaela</b>	<b>Tom</b>
<i>Session One:</i> Damaged an instrument. Inappropriate use of instruments.	No moments identified	<i>Session One:</i> Tom reached out to slap the music therapy student's face at a time of discomfort.
<i>Session Two:</i> Ripped pictures off the wall. Threw the drum beater at ESW.  Ripped keyboard from computer.	No moments identified	<i>Session Two:</i> Tom reached out to slap the music therapy student's face at a time when he was happy  Threw an instrument onto the ground.
<i>Session Five:</i> Played the instruments harder than was appropriate. Prepared to throw beater.	No moments identified	<i>Session Three:</i> Threw an instrument onto the ground.  Played an instrument harder than was appropriate.

As Boyd (1991) states, inappropriate behaviours can be the main block to social inclusion. Socially inappropriate behaviours were seen in six separate music therapy sessions. These behaviours included hitting and throwing objects. Kluth (2003) highlights the importance of framing socially inappropriate behaviours as they often result from the environment around the child. The hitting was evidently a form of communication in which Tom expressed his pain and discomfort and, on another occasion, his amusement. Throwing objects is another socially inappropriate behaviour that will lead to exclusion from the environment. The music therapy session gave the opportunity for this energy to be redirected into an appropriate activity such as beating on a drum loudly. However, the music sessions did not eliminate the danger of this behaviour without direct physical and verbal intervention from the music therapy student.

On several occasions in the music therapy sessions, instruments were played inappropriately or used inappropriately. Baron-Cohen (1995) describes this as a lack of ‘theory of mind’: children with autism can show an inability to comprehend the subtleties of a ‘naughty’ behaviour. John, Michaela and Tom all threw an instrument on the ground to communicate that they did not want to play that instrument. Children without autism would understand any punishment they received for disregarding a possession in that way. Some children with autism can treat objects single-mindedly without the regard of what the object is for or how it is meant to be handled.

### 5.2.2. Purposeful Removal from Musical and Social Interaction

**Table 7:** Purposeful Removal from Musical and Social Interaction

<b>John</b>	<b>Michaela</b>	<b>Tom</b>
<i>Session Two:</i> Removed himself from the musical space (more than one occasion).	<i>Session One:</i> Put her fingers in her ears and made loud guttural vocalisations.  Physically discouraged the music therapy student from picking up or playing instruments.	<i>Session Two:</i> Performed his happy dance outside the musical space.
<i>Session Three:</i> Tried to open a door beside the music area.  Laid his head on the table.	<i>Session Two:</i> Put her fingers in her ears and made loud guttural vocalisations.  Replaced instrument on floor.	<i>Session Three:</i> Performed his happy dance outside the musical space.
<i>Session Five:</i> Removed himself from the musical space (on more than one occasion).	<i>Session Three:</i> Put her fingers in her ears and made loud guttural vocalisations.  Puts the music therapy student’s hands over her ears. Removed herself from the musical space.	<i>Session Four:</i> Performed his happy dance outside the musical space.
	<i>Session Four:</i> Put her fingers in her ears and made loud guttural vocalisations.	<i>Session Five:</i> Performed his happy dance outside the musical space.

Several different ways of obtaining social isolation in the music therapy session were shown by all three children. These behaviours were not exclusive to the music therapy session. All three children physically removed themselves from the specific musical space. Tom moved out of the space to dance, which is a positive form of removal from the musical space as it allowed for him to express himself. John and Michaela removed themselves from the musical space with the intent of becoming involved in other activities unrelated to music. Michaela restricted social interaction with the music therapy student by putting her hands over her ears and/or singing louder. She also physically attempted to stop the music therapy student playing instruments and would block out the sound of the music therapy student's voice by covering her ears and singing louder. Tom, however, would maintain eye contact with the music therapy student. His 'removal' from the music space was not an attempt to exclude himself but a form of self-expression. The music therapy student believed it was important to allow Tom this form of self expression. As stated by Dunn (2000), in order to understand how a child with autism approaches their environment, they should be allowed to put their feelings and thoughts into their own words.

The researcher also noted moments of exclusion that related directly to John's energy level. During session three, John was unwell and simply needed time out from a demanding environment.

### 5.2.3. *Withdrawal*

**Table 8:** Withdrawal

<b>John</b>	<b>Michaela</b>	<b>Tom</b>
No moments identified	<i>Session One:</i> Became absorbed in her own vocalisations.	<i>Session Three:</i> Became focused on the beads in the wave drum.
No moments identified	<i>Session Three:</i> Stared out the window.	<i>Session Four:</i> Distracted by his wiggly tooth for an extended time.
No moments identified	<i>Session Four:</i> Became absorbed in her own vocalisations. Stared out the window.	<i>Session Five:</i> Tom does not respond to having fingers clicked in front of his face while staring out the window.

The music therapy student did not indicate any withdrawal exclusion moments for John as his reality orientation appears to have developed normally. Michaela and Tom however both displayed the more ‘typical’ egocentric moments of withdrawal where they satisfied their own self-stimulatory behaviours. These included staring out the window or becoming absorbed with an instrument or vocal melody. Tom also was distracted by his wiggly tooth and despite looking at the music therapy student, did not respond to her facial expressions or questions when playing with his tooth.

The music therapy session is also a structured exclusion from the everyday classroom. In a special education Unit, the classroom can be particularly noisy if you have a large amount of various vocalisations coming from different children. The music therapy session can provide silence and a quiet space for the child to be able to hear their own voice. Social interaction can not happen if the child is not able to recognise their own ‘voice’ amongst others. Removal from the classroom environment can also enable reflection time, not only for the child but the teacher as well (Noddings, 2003).

#### 5.2.4. Therapist Supported Exclusion

**Table 9:** Therapist Supported Exclusion

<b>John</b>	<b>Michaela</b>	<b>Tom</b>
<i>Session Three:</i> Music therapy student provides a listening activity that does not demand direct interaction from John.	No moments identified	<i>Session Two, Three, Four and Five:</i> Music therapy student allows Tom time to do his happy dance and in <i>Session Three</i> , joins in with dancing.
<i>Session Four:</i> Music therapy student provides a listening activity that does not demand any interaction from John.	No moments identified	<i>Session Five:</i> Music therapy student allowed Tom to stare out the window.

The researcher noted a distinct lack of Therapist Supported Exclusion Moments in Michaela’s music therapy sessions. Of the three children in this study, Michaela appeared to have the least need for social interaction with others in her environment. The researcher found it interesting to reflect on why Michaela’s exclusion moments appeared less supported than John or Tom’s were. Social interaction and task concentration was a high priority and reflected her music therapy goals in the session. As one of Michaela’s goals was to increase her flexibility not all of Michaela’s attempts to exclude herself from the music therapy session was supported.

The music therapy student positively supported social exclusion within the music therapy session in the following ways. Quiet non-demanding activities were provided, which allowed John time out from interaction. Often this meant the only sound in the room was that of a CD playing.

Proximal Communication involves bursts of activity interrupted by silent pauses. Appropriate energetic play and imitation of vocalisations are broken up by pauses to provide an opportunity for the child to initiate communication with the adult (Potter & Whittaker, 2000). Evidence of this was shown several times during Tom’s case material. The music therapy student joined in with Tom’s happy dance on the guitar, mimicking his pauses and playing only after a response from Tom. In the parachute



games, Tom was also given opportunities to react before the music therapy student would continue the game. In response, Tom would often vocalise to prompt the music therapy student.

### **5.3. Opportunities Provided by Music therapy student**

The researcher was able to offer opportunities for both social inclusion and social isolation in the music therapy session. It was imperative to recognise the need of the child in the particular moment. Often, information about the child's energy levels or behaviour for the days leading up to the music therapy session impacted on the type of session the researcher planned for the child.

Non-demanding activities such as listening to music were provided as a means of 'time out' for one child. The researcher was able to provide a calm environment to guide one child towards a state of some coherence as it appeared he was experiencing some internal chaos. Alternating between listening to background music and instructional learning has been found to help reduce problematic, aggressive behaviours (Burleson, Center & Reeves, 1989). This technique may be of benefit to aid John in reducing his throwing behaviour.

Silence does not mean exclusion or isolation. Silence is as important in music therapy as the music itself. In the space after a musical interaction, self-awareness may emerge as the silence is experienced (Trevarthan et al 1998). Allowing John space in the music therapy session through a non-demanding listening activity did not mean that he was excluded from the researcher. He clearly showed signs of awareness as he lifted his head when the music was stopped. The researcher also noted the 'silence' often used in the music therapy sessions with her clients with autism. Periods of silence often ensued as she waited for responses from her clients. Sitting together in silence may be seen as a lack of interaction but the silence sometimes preceded the child initiating social interaction.

The ESWs present in the session showed a respect of social isolation or social interaction. The ESW would participate if invited into engagement by the child or the researcher but would respectfully sit quietly if the child were focused on the music therapy student.

## **5.4. Personal Development**

The researcher found this study to be invaluable to her development as a music therapy student. This research was the first experience the researcher had working with children with autism. It has highlighted issues relating to the need for inclusion and exclusion, the importance of reflection for music therapy work (objective and subjective) and the complexity of communication and social interaction. Berger (2002) is right to state that some children with autism may not have a need for connectedness and as the child is the focus of the music therapy session, his or her needs should be considered. Music therapy focuses on what is best for the client and sometimes this need may be an opportunity to be excluded from the current environment.

Patterns seen for each child encourage the researcher to question her techniques used as the music therapy student within the sessions.

When the researcher graduates from this course, she will continue work with these three children at the Special Education Unit. As a music therapist, there will be a fine line between constantly following the Ministry of Education's inclusion initiatives and allowing a child of autism freedom to be excluded. For the researcher, this study highlighted examples of paradoxical social behaviour in children with autism. Richer (2001) draws attention to the paradoxical nature of children with autism's behaviour, calling it 'avoidance dominated motivational conflict behaviour'. Nordoff and Robbins (1977) also draw attention to this paradox in social behaviour in their experience as music therapists working with children with autism.

## **5.5. Limitations of study**

The immediacy of the researcher, the qualitative and descriptive nature of the project meant a high possibility of bias drawn conclusions. The researcher used 'member checking' by a professional music therapist and a peer music therapy student to ensure her observations and analysis of session material was consistent. The researcher acknowledges that further attempts to temper the bias nature of this research could have been undertaken. In hindsight, an impartial music therapist could have been employed to provide a separate analysis of the case material for collaboration with the researcher.

## **5.6. Opportunities for Further Research**

This research could be extended by lengthening the data collection period and completing a closer analysis of the techniques employed by the music therapist to promote inclusion or to support exclusion. Further research is necessary to determine whether the types of inclusion and exclusion moments are effective in promoting inclusion and providing for the exclusion needs of the child. Exploration of the development of each child in the music therapy session could add quantitative data to the study. Peers of the same age that do not have autism, could also be included in the music therapy sessions to encourage social interaction with children with autism.

## 6. SUMMARY AND CONCLUSION

This research project was conducted to find patterns of inclusion and exclusion within music therapy sessions and discover the role of 'exclusion' in music therapy for children with autism.

Government agencies have made it their policy to ensure that all children have the same inclusion rights regardless of age, gender, ethnicity and disability. Education policies are ensuring children with disabilities have opportunities for mainstreaming and inclusion in their school community. It is difficult for therapists to find a position that satisfies society's demand for children with autism to be included, while still respecting the child's rights to inclusion and exclusion and, finally, allowing the child to 'be' who they are.

The music therapy sessions described in this paper included evidence of opportunities for both social interaction and social isolation in music therapy sessions for three children with autism. Music therapists can provide opportunities for inclusion through the choice of music, various types of activities (listening, playing, improvising, singing and movement) and the level of attention demanded from the child in the music therapy session. A child's decision to be excluded can be supported by allowing a withdrawal from verbal interaction, providing a safe secure environment and a non-demanding environment.

Music therapy is able to offer a child with autism structured exclusion from their environment by respecting the level of 'aleness' the child may need. As a non-confrontational form of therapy, music therapy can facilitate and encourage indirect forms of communication. As the child progresses, direct forms of communication can be slowly introduced and developed. Music therapists employ both sound and silence within a session to provide an opportunity for children to 'hear their own voices'.

The findings of this research suggest exclusion does play a role in the music therapy session for a child with autism. The child's natural disposition towards aleness means his or her 'need' for connectedness may be less than a normally developed child. By recognising the paradoxical social behaviour of a child with autism, music therapists can offer alternative ways to develop social and communication skills within the music

therapy session. These developments can assist a child with autism to find opportunities for inclusion in his or her community.

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## 8. LIST OF APPENDICES

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2. Consent Form for Parent or Guardian ... ..
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## 8.1. Appendix One: Information sheet for Parents or Guardians



**Massey University**

College of Creative Arts

### *Information Sheet – 31st October 2005*

The 'Exclusion' of Autism: How does music therapy aid the psychological, social and educational difficulties confronted by children with autism in a special education setting?

**Researcher:**

Rebecca Travaglia

Ph: 04 380 1007

Music Therapy Student

**Supervisor:**

Sarah Hoskyns      Director of Music Therapy  
04 801 2794 extn 6410

Ph:

College of Creative Arts

New Zealand School of Music

c/- Massey University

PO Box 756

Wellington

Your child will be invited to take part in a project that will explore the psychological, social and educational difficulties faced by children with autism and how music therapy can be a tool to assist the children with these difficulties, particularly in the area of educational inclusion/exclusion. This project is being undertaken as part of a Master's in Music Therapy under the supervision of Sarah Hoskyns, Director of Music Therapy at the New Zealand School of Music in Wellington.

From the Special Education Unit at [insert school name], the researcher has selected three children whose files indicate that they have difficulty with their communication and/or social skills. Each child will attend one individual music session that lasts approximately for 25 minutes, each week. The music programme will involve singing, playing, listening and/or movement to music. It will be considered to be part of the school programme and will be provided for no extra cost to the child. It is anticipated that during the school holidays, the child will not attend music therapy. Therefore, it is estimated that each child will spend six and a half hours attending music therapy sessions over the data collection period.

If consent to videotape is given, sessions will be videotaped to look at the children's interaction with the music therapy student. Another person may be asked to view the videos to ensure the researcher's interpretations are accurate. No material, which could personally identify your child, will be used in any reports on this study. The records will be stored in a secure room at Massey University for a period of ten years, and will then be destroyed.

It is anticipated that the children will benefit from being involved in a music programme, as the music therapy student will be working to help them to develop their communication and social skills. There is a risk that the children could use the music equipment in hazardous ways. This will be minimised by having a staff member present in the music session at all times.

Participation in the project is entirely voluntary, and your child will be able to withdraw from the project at any time.

You will be notified by letter sent home with your child, that results of the research are available upon request. Please note that the results may not be ready for publication until midway through 2006. A copy of the results will be available from the researcher at the research site. If you prefer, a copy of the results can be mailed to an address supplied.

The researcher will be willing to discuss outcomes relevant to your child during and/or after the study.

This project has been reviewed by a Sub-Committee of the Massey University Human Ethics Committee, Palmerston North Application 05/60. If you have any concerns about the ethics of this research, please contact:

Dr John G O'Neill, Chair,  
Massey University Campus Human Ethics Committee:  
PN telephone 06 350 5799 x 8635,  
email [humanethicspn@massey.ac.nz](mailto:humanethicspn@massey.ac.nz)

If you require more information regarding the above project, please contact Rebecca Travaglia at the above phone number.

Rebecca Travaglia  
Researcher

## 8.2. Appendix Two: Consent Form for Parents or Guardians



College of Creative Arts

### Consent Form (Parent/Guardian)

For:

*A project to investigate the psychological, social and educational difficulties faced by children with autism and how music therapy can be a tool to assist the children with these difficulties, particularly in the area of educational inclusion/exclusion.*

1. I have read the information sheet dated \_\_\_\_\_ for volunteers to take part in the project to investigate how music therapy can be a tool to assist children with autism with any psychological, social and/or educational difficulties they face, particularly looking at the area of educational inclusion/exclusion.
2. I understand it is my choice to allow my child to take part in this study and that I may withdraw my child from the study at any time and this will not affect my child's eligibility to continue with music therapy outside of the project.
3. I understand that any information relating to my child's participation in this study is confidential and that no material that could identify him or her will be used in any reports on this study.
4. I understand that the investigation will be stopped if it should appear harmful to my child. The Head Teacher of the Special Education Unit within [insert school name], acting in *loco parentis* will be responsible for the welfare of students participating in the study and will make any decision to withdraw from the study, with and on behalf of the students.
5. I have had time to consider whether my child will take part.
6. I know whom to contact if I have any questions or concerns regarding the study.
7. I understand that the study will be presented by the researcher as a project towards the qualification of Master of Music Therapy, New Zealand School of Music.

Please go to page two (2) to sign consent forms



8. I give consent for my child to be videotaped in their music sessions for the purpose of this study: *(Please tick appropriate box)*

YES     NO

9. I wish to receive a copy of the results of the study: *(Please tick appropriate box)*

YES     NO

10. I would like the researcher to discuss the outcomes of the study with me: *(Please tick appropriate box)*

YES     NO

I, \_\_\_\_\_ (full name of parent or guardian), hereby give consent for \_\_\_\_\_ (full name of child) to take part in this study.

Signature: \_\_\_\_\_ Date: \_\_\_\_\_

Signature of Witness: \_\_\_\_\_

Name of Witness: \_\_\_\_\_

*Researcher:*

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Music Therapy Student  
Ph: 04 380 1007

*Supervisor:*

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### 8.3. Appendix Three: Information Sheet for Children



College of Creative Arts

#### *Information Sheet for Children*

Rebecca is going to offer a music programme for some children from our school. She will write a story about the children and their music and give it to her university teacher to mark. The story may be made into a book for other people to read. The story will not have our real names in it.

The story will be about the children and the music they make in the music session. It will also be about how the children who go to music get on with other children and adults in the classroom, playground or at home.

You are being invited to be one of the children in the story. You will have music each week with Rebecca for one term. We will be playing instruments and singing songs in the sessions.

There may be a video camera in the room. This is to help Rebecca remember what happened when the children were making music, so sometimes the camera will be turned on. Rebecca will tell you when the camera is turned on.

You don't have to be in the story if you do not want to be. You can talk to your mum and dad or to Annette at any time.

Rebecca thinks you will enjoy music and it will help you to learn different things. Rebecca will always have another teacher in the room with her when you are in the music session so that nobody gets hurt.

The story is for teachers, therapists and doctors. However, your mum, dad or carer can have a copy of the story too if they would like.

You can take some time to think about being in the story or not. You can talk to Rebecca, or Annette, and ask questions about the music story before you sign this paper. If you would like to be in a music group, please sign the 'Consent' page.

Read and explained to: \_\_\_\_\_ (name of student)

By: \_\_\_\_\_ (name of teacher)

Signature: \_\_\_\_\_

Date: \_\_\_\_\_

## 8.4. Appendix Four: Consent Form for Children



College of Creative Arts  
Consent form for Children

1. I understand what my teacher has explained to me about being involved in Rebecca's music sessions. I know Rebecca will write a story about the sessions that other people might read. I have asked any questions that I might have and am happy with the answers.
2. I know that I don't have to be in the music sessions and that I can talk to Annette at any time about pulling out
3. I know that the music sessions will be videotaped sometimes.
4. I know that my real name will not be in the story that Rebecca is writing.
5. I know that the music sessions will stop, if anyone is getting hurt.
6. I have had enough time to think about whether to take part in the music sessions.
7. I know I can talk to Rebecca or Annette if I have anymore questions or am worried about the music sessions.

I \_\_\_\_\_ want to be in Rebecca's music sessions.

Student Signature: \_\_\_\_\_

Date: \_\_\_\_\_

Project Explained by: \_\_\_\_\_