Promoting Communication and Socialisation in Music Therapy for Children with Cerebral Palsy

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ABSTRACT

This research was conducted as an exploratory case study as identified by Yin (2009) using primarily qualitative data gathered from a clinical practice setting with young children. The primary aim was to find out how music therapy could promote communication and socialisation for children with cerebral palsy at an Early Intervention Conductive Education Centre. This case study research involved two in-depth cases of children diagnosed with Cerebral Palsy at different levels of severity at aged four to five years old. It documents individual music therapy sessions over a three month period. Assessments of the two childrenôs communication and socialisation skills were made using the Assessment, Evaluation, and Programming System for Infants and Children (AEPS) to provide a comparison before and after the intervention. Staff perceptions about the nature of the childrenôs communication and socialisation in music therapy were sought using a short and informal interview with two staff members at the Centre. These three data sources were triangulated in the analysis and the findings are discussed individually. Each child showed diverse observable improvement in communication and socialisation based on perspectives of staff members interviewed, on clinical notes and on the AEPS evaluations. It is hoped that this mixed methods study could lead towards a more specific quantitative inquiry in the future about the effectiveness of music therapy for children with cerebral palsy.

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CHAPTER 1: INTRODUCTION

This study seeks to investigate the ways music therapy might promote communication and socialisation for children diagnosed with Cerebral Palsy (CP). These two skills are not only important on a personal level, but facilitate adaptation to a school setting. The research took place at a New Zealand Early Intervention Conductive Education Centre which receives referrals for children with CP, physical disabilities and developmental delay between the ages of six months and five years. For my final year of study for a Master of Music Therapy degree, I was placed at the Early Intervention Conductive Education Centre (EICEC) as a music therapy student (MTS), providing individual and group therapy to many of the children in the service.

My first impression of the Centre and the children was of being in a big family. All who are there ï staff and children - support and help one another to grow and enjoy what this world has to offer. The perseverance of the Centre in its objective of improving quality of life is remarkable, and an impressive diversity of exercise and activity is provided. However, as most of the children have challenges in communication, they lack the confidence and motivation to initiate contact with others and are less interactive with adults and peers than the majority of youngsters their age. Music has an important role at the Centre because the philosophy there is that the use of rhythm and music will improve motor function and skills such as problem solving, goal directed activity, and for the breaking down of motor tasks into simple steps. It was of great interest to me as a researcher therefore, to discover how music therapy could enhance the programme at EICEC and facilitate achievement of individual goals.

1.1 Study Design

This research uses case study research methodology to analyse music therapy practice with two children receiving regular sessions. Case study research is often used where data is collected from a range of sources, where therapists and clients want to know more about what happens in the process, and where there are complex fields of study with many variables affecting the participants and intervention (McLeod, 2010; Yin, 2009). I decided to focus on the cases of two children involved in music therapy and identified three areas of data gathering: my own clinical notes about regular music

therapy sessions, the staff teamôs perceptions of the children involved in music therapy, and a standard assessment of the children (used regularly at the Centre) before and after the research period. Findings are presented in the thesis in the three areas: (1) clinical notes made by the MTS (me); (2) short and informal interviews with staff, and (3) AEPS Assessment tool measuring changes in communication and socialisation over the three month research period. These three data sources are then triangulated in the analysis carried out to answer the research question.

1.2 Personal Stance of the Researcher

It has been said that the first five years of a childôs life are the optimal period for using music (Schwarts, 2008), as this is the time when the infantôs brain is most receptive and children go through a whirlwind of change, growth and development. I[1] strongly believe, as a researcher and MTS practitioner, that music is a medium allowing interaction and self-expression, both of which are particularly relevant outcomes of intervention for children diagnosed with CP (Bean, 1995).

Being the mother of a little girl, I am fully conscious too of the difficulties of parenthood, especially if the child is diagnosed with any sort of disorder. I have great empathy for both parents and children when I first meet them, and am keen to use my knowledge and ability to help them. I am on the whole an outgoing and lively person, but when I immigrated at age twenty from Malaysia to New Zealand, which has a culture very different from my own, I definitely felt I was not adapting well to the new environment. When I met anyone in New Zealand from the same cultural background as mine, however, I felt extremely excited, and became more open and able to initiate conversation of any kind. Although from arrival here I had been open and friendly to people with a different cultural perspective, I still found it hard to initiate conversation that was within my and their comfort zone. Indeed, music was the only vehicle that would help me to establish a rapport with others easily; and this has been my main experience since I began this course. Through music, either verbal or non-verbal, I have managed to express myself freely because there is no right or wrong comment or answer. Since music could act for me as a bridge to others, I

[1] As part of a qualitative study, it is common for the researcher as well as the MTS to use ôIô in her writing in order to express her feelings easily and allow her to make personal perceptions more precise.

believe that it undoubtedly has the power to assist people experiencing communication problems. I really wanted to help the children at the Centre to interact with anyone regardless of where they came from and who they were, and just be able to express their feelings and óspeak upô for themselves as other children would. I believe music therapy to be a sound vehicle in achieving the goal of communication and socialisation, and I was, and am, eager to do everything in my power to increase whatever possibilities exist of improving the childrenôs quality of life.

There are many empirical studies covering ways in which music therapy can help to promote communication and socialisation, but these deal mainly with children with autistic spectrum disorder (ASD) (Gold, Wigram, & Elefant, 2006). Although interaction is usually considered an important part of the music therapy process, some relevant descriptive studies give more attention to motor coordination and control**;** and because CP is a disability of motor function, it is natural for both the clinicians and researchers who are working on this population to focus on their work on physical rehabilitation (Bean, 1995; Roth & Wisser, 2004; Warren, 1997). Hence, promoting sociability in a special education setting is an important factor for children with CP because they are at the very beginning of their lives.

For the children I work with, therefore, music therapy provides a useful vehicle for discovery of some means by which to interact with people; in other words, for achievement of the (twin) goals of communication and socialisation. My research is intended then to explore these two areas more fully; as such exploration is an important feature of the primary mission of Conductive Education, considering childrenôs development holistically. The observations carried out could make an important contribution to this area of music therapy, and promote understanding of the relevance of these goals in music therapy practice with children with CP.

1.3 Research Question and Aim

The key question for this research is:

How can music therapy promote communication and socialisation for children with CP?

Its aim is:

To find out whether music therapy can motivate the children with CP at a Conductive Education Centre to be interested in communicating and to have more interaction with others verbally and non-verbally.

CHAPTER 2: BACKGROUND

In order to protect the privacy of the children, participants and organisation, all names used will be pseudonyms. At the time this study was undertaken, both of the children discussed had received regular weekly individual music therapy sessions at the Centre over a period of five months.

2.1 Conductive Education

In New Zealand, children with Cerebral Palsy are usually referred to Conductive Education either by the hospital, the Ministry of Health or the Ministry of Education. Conductive Education (CE) is a system specifically developed for children and adults with motor disorders who have little control over their movement due to injuries within the brain and central nervous system. This world-wide programme was first developed in Hungary in 1945 by Professor Andras Petö, who established his own institution internationally recognised for its success in educating and developing people with CP, Spinal Cord Dysfunctions, Spinal Bifida and other motor dysfunctions (Gayle & Jann, 1995). Conductive Education is based on holistic and humanistic views and seeks to improve all areas of a childôs development; focusing on the gross and fine motor skills but also aiming to enhance the emotional, social, cognitive and communicative domains. It is therefore a transdisciplinary approach that overcomes the fragmentation in rehabilitation and special educational objectives for children who have cerebral palsy (Bunt, 1994a; Tatlow, 2005a) .

The Early Intervention Conductive Education Centre (EICEC) where this study was carried out has a range of children with different diagnoses, aged from six months to five years. The majority of the children have been diagnosed with some degree of CP, and there are also a number diagnosed with either Autistic Spectrum Disorder or mild physical developmental delay. The Centre operates with the support of the Ministry of Health and the Ministry of Education. Besides the basic daily routine at EICEC, there are specific programmes offered by a speech therapist, a feeding therapist, an occupational therapist, a physiotherapist and an educational coordinator, all of whom work regularly alongside particular children. This is a transdisciplinary team and a group where various cultures are represented, yet they all come together to achieve the same goal, which is to help the children improve their quality of life.

Children diagnosed with CP can experience a variety of developmental challenges. The disorder is characterised by motor impairment and may involve global physical and mental dysfunction (Krigger, 2006). In addition, vision, hearing and speech can be affected, resulting in further impairment of communication skills (Bean, 1995). Although such impairment is not a direct diagnostic criterion for CP, its importance should not be overlooked. As most of the exercise and activities provided at the Centre required individual support for each child: horse-riding, personal physical exercises, swimming and tacpac[2], consequently the children often become attached to a particular staff member at the Centre; and while this is an important and valuable process for settling at school, it can at times inhibit the children from having more interaction with other staff members and children. For a number of the children, English is not their parentsô first language, so attending an English-speaking Centre can also provide communication challenges and decrease the possibility of interacting with other staff members and peers. However, as well as the communication issues the children encounter, there are clearly specific sensory and physical aspects that may slow the progress of the child in communicating and socialising confidently with others.

2.2 The Music Therapy Programme

In my work as a music therapy student who undertaking this study, major emphasis was placed on improvisation and on the use of music as a means of self-expression and communication between children and therapist in both group and individual music therapy sessions. Space and silence were given while anticipating verbal and non-verbal responses from the children. I also realised that accommodating the children musically was a significant approach, especially in this particular setting and this seemed to happen spontaneously from me as part of my personality.

Music plays a crucial role at CE. Much importance is given to rhythmical intention, which is very useful in assisting people with motor disabilities and can improve concentration, attention, anticipation, socialisation, motivation and group cohesion (Tatlow, 2005b). The rhythmic aspects of rhythmical intention include the delivery of verbal intention, the counting or repeating of keywords and the use, for voluntary

[2] Tacpac is a structured tactile play to enhance childrenôs awareness.

activity, of the musical features of songs, chants and rhymes. The use of language to state the intended goal and the steps involved in achieving that goal is often encouraged at CE as it allows the children to be able to predict and know what is happening next (Gayle & Jann, 1995). Besides, children also learn to visualise and perform controlled movements, and being able to concentrate on the motor tasks for longer periods of time (Tatlow, 2005b).

Music has some similar functions to language insofar as it can reinforce meaning for children, and has in addition the advantage of working with or without words. Musical activity often motivates a child to challenge himself/herself to achieve a task; and music therapy combines well at EICEC with the objectives of rhythmical intention, as well as enabling personal development and the achievement of individual education programme (IEP) goal**s**.

Individual music therapy sessions were held mostly in a small room at EICEC which was well-equipped with tuned and untuned instruments: a guitar, a keyboard, a metallophone, a harmonica, ocean drums, wind chimes, a djembe, a bongo drum and other percussion instruments. Most of the children were given the chance to receive music therapy at the Centre; and families were free to decide whether or not to make use of this service. The children were mostly referred to music therapy by the Conductor[3] of the Centre; and as I attended CE three days a week, each child referred would receive at least one music therapy session weekly. The sessions usually lasted between 10 and 40 minutes depending on the childôs attentiveness. Parents, team members and other therapists were welcome to participate and observe the sessions for different purposes.

To enhance the connections within the Centre itself, the need for group music therapy sessions was identified after I had had some experience working with the children. The group sessions ï which were held once a week when all the children and staff members gathered together and worked collaboratively as a team ï focused on themes agreed by staff at the Centre each term according to the dynamics of the group. These included kinds of transport, farm and wild animals, numeracy and literacy, and music

[3] In Conductive Education, the Conductor is the person who leads the team and supervises the programmes at the Centre at all times.

and movement. While this aspect of the music therapy programme will not be included in the findings for this study (as the focus was on individual sessions), it may receive some consideration in the discussion.

As described in the introduction to this thesis, two children involved in the music therapy programme at the EICEC were recruited for this study, and the study design and recruitment process will be explained more fully in chapter three. The clinical presentation for each child will be described in Chapter five, together with the findings for each clinical case.

CHAPTER 3: LITERATURE REVIEW

Dileo, Wheeler, Shultis, and Polen, (2005) observed that the function of a literature review is to lay out the existing knowledge on a specific topic relevant to the study (Dileo, in Wheeler 2005). To allow a more precise and holistic understanding of this research, six main categories have been identified and will be discussed separately under different headings. The categories are:

- Clinical features of Cerebral Palsy;
- The communication process for children with CP;
- The importance of Early Intervention;
- Music Therapy and Early Intervention;
- Music Therapy and CP;
- Relevant Music Therapy approaches;
- Summary.

The use of Massey University library catalogue Encore, RILM abstracts of music literature, Science Direct, Academic Search Premier, Voices, Google Scholar and the EBSCO databases searched through óDiscoverô have indicated articles, books and journals that offer insight into the field of music therapy and cerebral palsy.

3.1 Clinical Features of Cerebral Palsy (CP)

Cerebral palsy (CP) is generally known as a chronic physical disorder of cerebral origin that affects particular physical movement and development. CP is not a single diagnosis, however, but an óumbrellaô term encompassing a group of disorders affecting the development of movement and posture. These developmental challenges cause limitations in activity that are attributable to non-progressive disturbances; i.e., disturbances of sensation, cognition, communication, perception, behaviour, and/or a seizure disorder (Gilboa & Roginsky, 2010; Zeldin). CP is a static neurological condition resulting from a brain lesion occurring during the prenatal period in about 75% of cases, the perinatal stage in about 5%, or the postnatal period up to the age of three or thereabouts (around 15%) (Gilboa & Roginsky, 2010; Krigger, 2006). According to the aetiology, the majority of CP cases acquired prenatally but the result is unknown. It is suggested however that the risks for CP are multifactorial, and can include birth after fewer than 32 weeksô gestation, a birth weight of less than 5 lb. 8oz

(2,500 g), intrauterine growth restriction, intracranial haemorrhage, and trauma (Krigger, 2006).

According to the Cerebral Palsy Society of New Zealand, the prevalence of the disease has remained relatively stable at 2.0 to 2.5 per 1,000 live births. Of the approximately 7,000 people in New Zealand who have some degree of cerebral palsy, one third is under 21. The severity of the brain damage ï which of course interferes with normal childhood development (Geralis, 1991) - generally depends on the timing of the injury. Common disabilities in cerebral palsy are:

- Increased muscle tone that will cause stiffness in the joints of the body together with stereotyped movements
- Insufficient muscle tone which will make children ñfloppyò in their movements
- Involuntary movements and constantly changing muscle tone. This means the child will have high and low muscle tone and be unable to control muscles, often having unpredictable movements (Bean, 1995).

CP is divided into three major classifications: Spastic CP, Ataxic CP and Dyskinetic CP, which provide clinical features of more specific movement impairments (Geralis, 1991)

(1) Spastic CP

This is the most common type affecting 70-80% of people with the condition in New Zealand (Streeter, 2006). Spastic CP causes stiffness or tightness of the muscles because of incorrect messages sent by the damaged brain. People with this condition are hypertonic[4], which causes motoric dysfunctionality. Spastic CP is divided into three categories:

i. Spastic diplegia - affecting bilateral lower extremities more than upper extremities;

[4] ôHypertonicô in this situation means having high degree of muscle tone or tension.

ii. Spastic hemiplegia - predominantly affecting one side of the body, with more upper than lower extremity spasticity;
iii. Spastic quadriplegia - affecting all four limbs and putting the patient at risk of osteopenia, osteoporosis, and fracture.

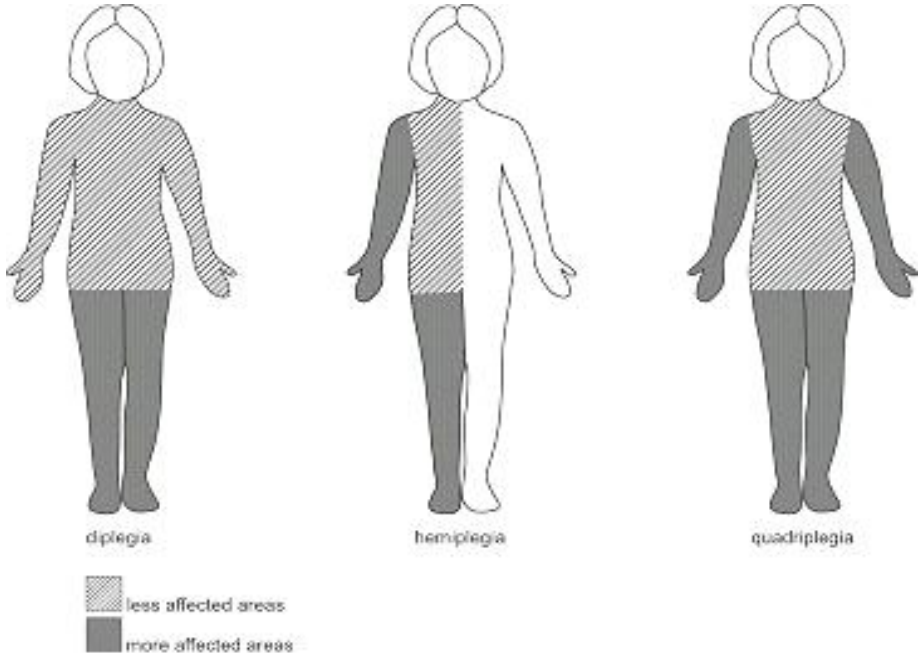


Diagram adapted from (Evans, 2008)

(2) Ataxic CP:

This is the least common type affecting the sense of balance and depth perception. It is characterised by low muscle tone and poor coordination of movements. It affects a personôs gross motor skills, especially walking, balancing and coordination. Thus, people with this condition will have very unsteady and shaky movement.

(3) Dyskinetic CP:

This affects 10-20% of people with the disorder. It is separated into two forms:

i. Athetosis: uncontrolled, slow, óstormyô movements;
ii. Dystonia: sustained or intermittent muscle contractions causing twisting or repetitive movement.

Many patients have characteristics of more than one of the three types. The most common combination is spastic and dystonic[5] movement, but other combinations are possible (Blair & Watson, 2006; Evans, 2008; Geralis, 1991; Gilboa & Roginsky, 2010; Hoskyns, 2008; Krigger, 2006; Zeldin).

Apart from motor disabilities, children with cerebral palsy often experience many other difficulties: mental disability, seizures, learning problems, attention deficit hyperactivity disorder (ADHD), poor vision and hearing, and sensory and speech impairments that further affect their emotional, communicative, and social disabilities (Geralis, 1991). The combination of these difficulties not only causes physical problems but also impairs the ability to communicate and interact with others.

3.2 The Communication Process for Children with CP

Communication is the process of transferring a message from a sender to a receiver. It can be achieved through verbal or non-verbal communication, through gestures, body movements, eye contact and facial expressions. With visual and cognitive impairment, children with CP can experience delays in language development (both for speaking and writing) and in interpersonal interaction (Coulson, 2004). If children with CP are to produce speech, efficient exhalation is a major concern. The respiration, phonation and nasality may cause a difference in sound, pitch, and result in poor articulation for speech (Coulson, 2004; Pennington, 2008). For children with CP, consequences of experiencing delayed language development may include a lack of confidence, difficulty interacting with their world and reduced world experience (Pennington, 2008).

ñMusic provides a raw form of non-verbal communication, where the therapist uses the elements of music with this population to create communication intentionally and share meanings, by the development of a shared repertoire of events that have meaning and context for therapist and clientò (Wigram, Pedersen, & Bonde, 2002, p. 177). Music can therefore encourage contact and communication in a therapeutic way. Once the interaction is developed between the therapist and the client, any changes in the clientôs movement and facial expression can be interpreted as feelings and are

[5] ódystonicô means the contractions of sustained muscle that cause twisting and repetitive movements or abnormal postures.

reflected in the therapistôs music, which elicits the clientôs awareness and support of his/her feelings. Meanwhile the client is able to discover and develop his/her own way of communication using a non-verbal method such as music (Stamenovic, 2009).

Both the Gilboa and Roginsky (2010) and Pennington (2008) studies indicate the importance of the parent-child relationship while working with children with CP experiencing communication difficulties. According to Gilboa and Roginskyôs recent study (2010) using dyadic therapy [6] to form a typology of relationships and communication, communication increased during the dyadic music therapy treatment in both verbal and non-verbal cases. On the other hand, Pennington adopted a slightly different perspective where parents lead the conversation whereas children adopt a respondentôs role. As a result, this puts children at risk of becoming passive communicators, as they rarely make requests of their own and take very little control over conversations. Thus, children with CP would be socially isolated and fail to develop a full range of communication skills (Pennington, 2008). The study concluded that the interaction for children with CP becomes ófossilisedô, therefore the appropriate intervention is a vital component to consider when aiming to increase the potential for communication (Gilboa & Roginsky, 2010; Pennington, 2008). The aim on intervention however is not to cure, or achieve normalcy, but simply to increase functionality and improve capabilities (Krigger, 2006).

3.3 The Importance of Early Intervention

Research has confirmed that effective elements of early intervention play a critical role in childrenôs development (Hume, Bellini, & Pratt, 2005). Early intervention helps advancement in all areas: it is vital therefore for a child to receive this intervention as soon as possible, as healthy development of his/her self-esteem is dependent upon it. Without early intervention, a childôs self-image may suffer and he/she may start to avoid school (Hume, et al., 2005). Although there are innumerable studies relating to special early intervention, I will focus on the area directly relevant to this study.

[6] Both the mother and the baby attended the music sessions in their house, providing a secure and comfortable environment for both parent and the child.

It is natural for parents with a disabled child to seek the best available treatment, and CE brings hope for motor rehabilitation in young children (Beach, 1988). CE has maximised the development of young childrenôs motor activities (play, relaxation, forming satisfactory relationships with their mother and other family members) as early goals within the treatment, and it often integrates activities through a transdisciplinary team (Beach, 1988). Music therapy can also support other therapistsô physical and coordination goals, by creating motivation to move in order to make sounds on an instrument or to reach for something that makes an interesting sound (Hoskyns, 2009). Fearn and OôConnor claim to have discovered the effect of collaborating music and attuned movement therapy in the Cheyne Day Centre[7]: the approach has greatly enriched their clinical practice and has been beneficial for their clients because of the advantages in embracing input, advice and support from other disciplines (cited in Twyford, 2008). Similarly, music therapy at EICEC has been found to be an appropriate therapy for collaborative teamwork designed to enhance the wellbeing of the children at the Centre.

3.4 Music Therapy and Early Intervention

Why is music viewed as being so therapeutic? The use of music therapy in special education has become increasingly valued in New Zealand, as its benefits have been considered in relation to other ways of working with disabled children. Its practitioners are able to provide a service whereby the special education community can refer children with special needs for music therapy assessments, and the music therapist can contribute to discussion regarding the appropriate service model to follow (Rickson, 2008). Music is unlike speech: as a means of making a connection, it can involve verbal communication and the playing of instruments at the same time (Oldfield, 1995). Musical stimulation can lead to feelings of emotional excitement created by musical tension, harmonic dissonance, fast tempo, or the use of dynamics. Children are able to affirm their thoughts or actions by using music, and cognitive satisfaction is achievable through the reading or pretend play of music (Schwarts, 2008). Hence, the use of a music therapy service is seen as of particular value in special education.

[7] The Cheyne Day Centre is a fully integrated service combining education, therapies and health care for young children aged from two to seven with physical, learning, health and emotional difficulties (Twyford, 2008).

Jonsdottir, (2002) believes that children with disabilities obtain greater pleasure from music and musical expressiveness than normal children do. In order to show a significant difference in growth and development, early musical stimulation is required because of its potential to reduce the impact of disabling conditions (Jonsdottir, 2002). Music therapy as an early intervention means children participate in music from infancy through preschool, and with its focus on providing pre-musical and musical experiences, it stimulates physical, sensory, and cognitive development. Music takes on different roles at different times in the lives of young children. It can promote increased sensory stimulation and also provide a sense of nurture and comfort (Marley, 1984). Archer (2004) states that the essential reason for use of early intervention with special needs children is the quality of interactive experience that might influence their development.

Music therapy studies have highlighted the features of the parent-infant relationship, because relationships are the building blocks of healthy development (Archer, 2004; Beach, 1988; Gilboa & Roginsky, 2010; Oldfield, 1995; Oldfield & Bunce, 2001). In Jonsdottirôs study (2002), constant emphasis is placed on the need for children to begin music therapy as early as possible, because the child remains vulnerable to risks and open to over-protective influences through his/her early years and into adulthood. Therefore, music as a therapeutic intervention can play not only an important role in the development and wellbeing of the child, but also prove beneficial to the families.

As the goals and principles of early intervention focus on improvement of the quality of a childôs emotional regulation and long-term development, it is claimed that the most effective early interventions occur when parents and professionals are involved in the process (Jonsdottir, 2002). As children spend most of their time with their parents, the latter are considered to be essential figures in the creation of a familiar environment in which music is available to the child. Parents can create, explore, and manipulate sounds at home instead of relying on music therapy sessions (Walworth, 2009). Both the quality of relationships and the care received by the children were of cardinal interest where attachment and bonding became the framework for studies in child-caregiver interaction (Jonsdottir, 2002). To bring about the best possible outcome, the participation of parents in the work of the transdisciplinary team is essential, and with the inclusion of music therapy, children can feel more secure to

explore their potential (Archer, 2004). However, a music therapist often needs to be flexible in adapting to the normal work setting of a given place, and it is disappointing that the involvement of parents is restricted at EICEC because of individual family commitments and various considerations at the Centre. Flexible approaches need to be applied to achieve the same goals in intervention, and this will be discussed later in this chapter.

3.5 Music Therapy and Cerebral Palsy

This section will focus on both research-based and clinical practice-based studies that have preceded this study and that provide insight and guidance for research in music therapy and CP. There have been some studies focusing on gait, anxiety and pain reduction combining music therapy with acupuncture (Kwak, 2007; Peng et al., 2011; Wu, Yu, & Liu, 2008) and such studies indicate that music and music therapy can specifically benefit and support children with CP for their coordination, physical management and rehabilitation. Three qualitative research studies, three articles devoted to clinical-based studies and a quantitative research indicated more specific information regarding the support of social and emotions aspects for both adults and children in music therapy. The studies provided further support for the effectiveness of music therapy in bringing about significant changes in specific behaviour of persons with CP (Bean, 1995; Colle, 2003; Coulson, 2004; Gilboa & Roginsky, 2010; Krakouer, Houghton, Douglas, & West, 2001; Perry, 2003; Warren, 1997).

Bean (1995) explores differing approaches to music therapy with children with CP, and these could be divided into cases for highly-directive, and non-directive, intervention. He emphasises that the type of intervention depends on a number of factors, including the condition, responses and needs of the child, the initial music therapy assessment, and the nature of the therapistôs approach. Warren (1997) has stressed the positive results that have emerged for her client during her therapeutic sessions. She has highlighted not only the physical awareness and independence of movement that has developed, but also how music therapy has enabled expression, which became increasingly integrated throughout the intervention. Colle (2003) has included in her study detailed descriptions of the processes of interactive music therapy with two groups each comprising four children with CP. Her investigation indicated that children with severe and multiple disabilities possess and use a musical

understanding which enables them to connect with and relate to the therapist. She based her hypothesis on the premise that the role of the music therapist is like that of the ógood-enough motherô and undertook verification of the idea that the mother-infant relationship can provide a model for the therapist-client relationship (Colle, 2003). Music therapy as an early intervention is therefore strongly advocated in this study. Recent research by Gilboa and Roginsky (2010) set out to investigate the effectiveness of dyadic treatment in improvement of the mother-child communication and relationship. This is a single-subject qualitative study focusing exclusively upon a four-year-old boy and his mother as an early intervention. It was essential that the motherôs deep acquaintance with the child and her parental intuition be empowered during the treatment so that she would have ample opportunity to express her parenthood and demonstrate her relationship with her child (Gilboa & Roginsky, 2010). Krakouer and colleagues implemented using a multiple baseline research design to provide a statistical result in specific changes in the individual target behaviours (Krakouer, et al., 2001). The study specific in emotions, ñhappinessò, which attempted to encourage participants to use their own chosen instrument(s) to express happiness, where then the therapist gradually moved from the musical instrument to either chanting and singing to encourage variations in responses from the participants. This approach provides appeared to be effective in changing a range of target behaviours, such as hand eye coordination, head movements and torso position (Krakouer, et al., 2001)

Perry (2003) focused her study relating to communication development upon musical interaction with children suffering from severe and multiple disabilities, including CP. To promote communication, she applied flexible improvisational techniques in her research. The results indicated that, in general, musical interaction provides a framework for the communication partner to sustain interaction. For children with CP who are non-verbal , communication may be expressed by a slight movement of the head, body movement, or the flicker of an eye (Coulson, 2004). Through the musical therapeutic process, a childôs attitude to his/her body can be enhanced and they can begin to realize that they have possibilities for increased self control (Bean, 1995). Krigger (2006) has suggested that the treatment yielding the best results requires a team approach; no individual therapy can entirely meet an individualôs needs, especially working collaboratively with speech language therapists when working

with children with CP who are non-verbal. (Coulson, 2004). To improve the clientsô communication skills, it is recommended that levels of intentional communication begin early. This is because musical interaction provides worthwhile opportunities to influence others, improves motivation to communicate, and the chance for interaction through musical óconversationô (Perry, 2003).

The power of music to facilitate and enhance meaning in communication is predominantly expressed in music therapy. The latter serves as a vital intervention for children with special needs because music can be a useful tool for children to communicate on a more emotional, relationship-oriented level that has no need of words; it is a non-verbal or pre-verbal language that passes language barriers (Ball, 2004; Malloch & Trevarthen, 2008b). Music can influence peopleôs emotions. It is a medium that involves a complex range of expressive qualities, dynamic form and dialogue, and establishes alternative communication that can help to achieve engagement, interaction and the building of relationships (Wigram & Gold, 2005). Music therapists carefully respond to, elaborate and extend the childôs behaviour through music, and incorporate in their treatment a range of non-verbal intentional communication techniques (Perry, 2003).

Music is the best source of participatory consciousness and works effectively not only with the ill, but also for those with social, cultural and political problems who are exiled from their cultures, their music, and their homes. Community music therapy can help to regenerate communities and address social fragmentation, rebuilding trust and social bonding. Therefore Mallochôs and Trevarthenôs communicative musicality can be seen as a cornerstone of current attempts to theoretically model how musicing can embrace such power and hope for the modern world (Malloch & Trevarthen, 2008b, pp. 357-376). It is reckon that people with communication difficulties often show that they enjoy music and sound and, in some cases, are clearly more alert and less isolated when music is involved in the communication process (Oldfield, 1995). As music therapy uses musical interaction as a means of nonverbal communication, it demonstrates potential as an effective approach, particularly for children who are not accessible via verbal language (Gold, Voracek, & Wigram, 2004).

3.6 Relevant Music therapy Approaches and Techniques

Nordoff and Robbins (1977) have suggested that the therapist should determine clinical goals for each session according to the response of the child (cited in Oldfield, 1995). As the therapy progresses, therefore, the strategies and techniques may vary and it will be impractical to follow a single approach; so flexibility is an essential attribute for the music therapist if he/she is to adapt to the clientsô needs, emotional changes, and to the interactional state (cited in Wigram, 1999). As various approaches will be used to encourage interactions and engagement, the power of music to ôspeakô directly to individuals makes it an invaluable facilitator when language is not shared (as between different cultures), or when it is not fully developed (Coulson, 2004), where this is one of the most common approaches used with young children.

According to Bunt & Hoskyns, improvisation is the action-product of musical imagination and intuition, and Shoemark suggests that the song is created on the spur of the moment in response to the children, so as to provide an ideal medium for mutually regulated experiences (Bunt & Hoskyns, 2002; Shoemark, 2008). The use of the improvisation technique enables the freedom to express, and spontaneous musical interactions support the developing therapeutic relationship (Warren, 1997). Through improvisational techniques, the music therapist would be in a position to move to more structured musical activities as appropriate (Archer, 2004). Hence, music is used as a sort of bridge between the inner and outer world of a child, and is developed as a common language between the therapist and child (Wigram, Pedersen & Bonde, 2002). Imitation, either imitating physical movement, musical interpretation or vocal responses is very often used as an immediate way of establishing some connection with a child (Bunt, 1994b). Perry (2003) employed imitating technique in her research study to incorporate the vocalisation of two children with CP who were found to have difficulty initiating and controlling their voices. Coulson also stated that vocalisation provided the children with a confidence in their ability to cope, increased their willingness to communicate; and reciprocal and responsive behaviours emerged (Coulson, 2004). It is significant that matching, mirroring or reflecting the musical material could facilitate both the building and the reinforcement of relationships (Wigram, 1999).

When working with young children, structured sessions may provide better musical

expectations. They allow the children to remember, recall, and repeat the music experience that was shared (Schwarts, 2008). It is often helpful then to provide the same beginning and ending song in the music sessions, and allow freedom in between because that can help the children to be more aware of what has happened or is happening in the session. The balance between structure and improvisation allow the possibility of communication, particularly when dealing with children who have communication difficulties (Oldfield, 1995). Relating to Archerôs (2004) experiences in early intervention, she claimed that she responded to the childôs initiatives, worked with the childôs responses, paced the engagements and made use of silence while working with young children. Therefore, the combination of musical skills, therapy skills and personal relating skills are relevant to enhance the success of the therapeutic process (Krakouer, et al., 2001).

According to Bunt (1994), in treating some children with cognitive disabilities or speech impairment, encouragement and stimulation of all kinds of vocal activity through musical interaction becomes an important feature of the music therapy approach. To prompt communication, it is suggested that natural methods of achieving this (for instance vocalisation and eye directing) be used (Pennington, 2008). Gentle humming ï which is an approach commonly used in early intervention (Schwarts, 2008) ï may also encourage the child to try to match the sound, especially when working with non-verbal clients (Coulson, 2004). It could create the sense of a óhomeô environment in which parents, especially hum and sing songs to their children. Bunt (1994) has stated that ñsynchronous vocal interaction with a young child often employs silences, switch-over points and other non-verbal cues that break up the sustained stream of vocal play into antiphonal turn-taking. The relaxed and child-centred setting of much music therapy with this age-group often fosters playful exploration of vocal soundsò (Bunt, 1994a, p. 94). Thus, much stressing, pausing, repetition and differing durations are observable in these systems, but somehow this may lead to unclear patterns of interaction, so the music therapist must be proficient in responding nonverbally at the right time in order to maximise the musical responses of the child (Bunt, 1994b; Wheeler, Shultis, & Polen, 2005).

Music therapy includes a wide range of strategies and techniques, therefore it can be helpful when different music therapy approaches are combined to further facilitate the

development of reciprocal, interactive communication and play (Gold, et al., 2004). Through the growth in childrenôs playfulness and confidence, music provides extra connections to support coordination and communication work (Hoskyns, 2009). Each approach discussed above seems to be specific: however, they share the essential concern to establish a therapeutic relationship with the clients. Without a good relationship, it is hard to continue the therapeutic process. Through various appropriate musical approaches, therefore, music therapy might well help children with CP to improve their communication and socialisation skills once the relationship with the therapist is built.

3.7 Summary

Interesting and relevant clinical studies in music therapy included in this chapter which point to the value of using music therapy to enhance social and emotion aspects for people with CP, specifically young children. As a researcher, I felt that those clinical studies are very significant as they provided better understanding of the value of working with children with CP which I should not be overlooked, because they related to my own practice.

Van Colle (2003), Gilboa & Roginsky (2010) and Perry (2003) all employed specific music therapy techniques. In contrast, this research adopts different approaches in the music therapy process by using flexible approaches according to the needs of the clients. This will provide a broader expectation of employing music therapy as an early intervention, and enhancing communication and socialisation for children with physical disabilities. Both the Van Colle and Gilboa studies indicate the importance of the mother-infant relationship and interaction; and this relationship should always be borne in mind by the therapist, because without establishing a relationship with the client, the therapeutic process will not be successful.

CHAPTER 4: METHODOLOGY

As a new practitioner interested in observation and the regular practices of the team of educators and therapists at the Early Intervention Conductive Education Centre where I was on placement, I was keen to draw on a case-centred methodology for my inquiry about music therapy with children with CP. Aigenôs presentation of naturalistic inquiry in Wheelerôs *Music Therapy Research* text was an initial inspiration for my proposal (Aigen, 2005) as the study fulfilled a number of the features of the approach which he identifies as naturalistic inquiry. (These included the focus on the natural setting, with regular practice tasks undertaken; the researcher as the primary instrument for data-gathering; the researcher using clinical knowledge and experience in the setting, and conducting daily affairs to gain a more complete understanding of a particular issues; and that the study is presented in case study format.) Following dialogue with examiners and my supervisor for this thesis, it was decided that it was more productive to frame the study within the context of ócase study researchô as described by Yin (2009) and so the process of two varying cases at the centre could be brought together, and the findings presented as an exploratory case study about communication and socialisation in music therapy for children with CP. As the literature review suggested ï there is growing interest in the value of music therapy for children with disabilities (Archer, 2004; Hume, et al., 2005; Rickson, 2008), but few specific studies on music therapy and CP have been undertaken which focus especially on developing communication and socialisation skills. It is hoped therefore that this research will identify issues, raise awareness and lead to more direct evaluation of this valuable area of practice.

4.1 Case Study Research

McLeod has argued for the validity of case study approaches to research in the complex environment of counseling and psychotherapy practice. He suggests that the rigorous analysis of carefully documented case material can make a contribution to shared professional and scientific knowledge, enable therapy clients and their families, practitioners and funders to gain an understanding of what actually happens in therapy programmes and provide structured opportunities for reflection, which results in personal and professional development in therapists (McLeod, 2010). These processes are closely in common with those found in music therapy and the concept of

reflection and (student) therapist development is clearly very appropriate for my research as a student therapist.

Yin offers a technical definition of case study research with two main features: first it is an empirical inquiry that óinvestigates a contemporary phenomenon in depth and within its real-life contextô, especially when the óboundaries between phenomenon and context are not clearly evidentô. Second, case study research uses data collection and data analysis strategies to cope with óa technically distinctive situation in which there will be many more variables of interest than data pointsô. It relies on multiple sources of evidence with ódata needing to converge in a triangulating fashionô and benefits from theoretical concepts underpinning the data collection and analysis (Yin, 2009, p. 18).

This study allies with Yinôs definition in the following ways: it draws on three different data sources: 1) clinical notes on music therapy with two children in music therapy, 2) short semi-structured interviews with staff who work with the children and 3) AEPS assessment of the two children at beginning and end of the research period. These data sources were analysed using thematic analysis (Braun & Clarke, 2006) for the qualitative data (notes and interviews) and descriptive statistics and graphing for the AEPS assessment results. Theoretical concepts that underpin the study are derived from Buntôs experimental research on music therapy and childrenôs development (Bunt, 1994a, p. 94), and Malloch and Trevarthenôs landmark book showing how in mother/infant communication there exist noticeable patterns of timing, pulse, voice timbre, and gesture which focuses on the rhythm and sympathy of musical expression in human communication from infancy. It demonstrates how speaking and moving in rhythmic musical ways is the essential foundation for all forms of communication (Malloch & Trevarthen, 2008a).

4.2 Participants

Primary participants in this research included two invited staff members who watched selected videos relating to each child and participated in semi-structured interviews about their perceptions of each child engagement in music that shown in the videos,

and myself as the MTS practitioner who conducted the music therapy sessions and wrote detailed notes of my work.

The research also relied on two children between four and five years of age, both diagnosed with cerebral palsy (of differing degrees of severity). They were either having difficulty in communicating or showing a lack of communication and socialisation skills and had been referred for music therapy at the Centre. Each individual music therapy session was videoed to allow me to write detailed clinical notes and reflections on the sessions. The clinical notes were used as a data source. Informed consent was sought from parents to use these notes and to give permission for the staff to review the video of sessions, which will be discussed further later in the chapter.

4.3 Ethical Considerations

Before seeking approval from the Ethics Committee, and to minimise the possibility of conflict and offence, I, the researcher consulted the Kaumatua [the Maori Consultant] at the site nearest to the Centre. He gave me a written assurance that the research, and the methods followed, in no way breached standards of cultural sensitivity. Following this, ethical approval was sought and gained following an expedited review from the Central Regional Ethics Committee (Reference Number: ***CEN/10/EXP/039***). Regular music therapy continued to be offered to all children within the service, whether or not they participated in the study.

Consent was sought, through a third party, from the parents, from the child, and from the staff member participants[8]. An information sheet was provided to all potential participants and the project was clearly explained[9]; participants then had two weeks to decide whether to partake in the study. In addition, agreement to participate was sought from the child who was able to understand. Every attempt was made to disguise the identities of participants: names were changed and identifying details concealed throughout the project. To protect the rights of participants, care was taken to ensure that those taking part were aware that their participation was voluntary and that they could withdraw at any time.

[8] Consent and assent forms can be found in appendix 1-3, pp. 99-101.
[9] Information sheets can be found in appendix 4-6, pp. 104-109.

4.4 Methods and procedures for data collection

Data was collected from three different sources to form a rich and detailed picture of the cases and to answer the research question in as full a manner as possible. The data gathered and the procedures for each were as follows.

4.4.1 Recruitment of Children for the Study

The two children received two individual music therapy sessions weekly from August to October 2010, while regularly attending the Centre[10]. Children over the age of five were not eligible to be considered for participation, as the research was focused on preschool children attending the Centre and taking music therapy as a regular part of their education. Children who were potential subjects were identified by the Conductor of the Centre, and parents were approached by him before the research period. In each case he explained the project to both parents, and to the children themselves as appropriate, as often they can understand quite well, and we wished to give them the chance to give assent where possible. It was decided that the first two families of children in music therapy who responded would be the focus of the study. The two children recruited were both boys and close in age, but they showed different levels of ability. One of the children was better able to understand and therefore signed the assent form (*see* appendix 2). Information relating to the children recruited is set out in Table One below:

Table 1: Children who participated

Name of child[11]	**Child's age**	**Child's characteristics**
Zaizai	5 years old	▪ From a Chinese-speaking family. ▪ Spastic quadriplegia CP ▪ Non-verbal, has visual problems, severe physical disability, very quiet, manage to express himself through making vocal sound, giggling and crying. ▪ Mainly reacted to his motherôs voice[12].

[10] A two-week term break fell at the end of September, so there was a gap in the three-month research period. The study, however, would focus on the overall participation of the child.
[11] The names and identifying details of all participants in this study have been changed in order to protect the privacy of the participants.
[12] Zaizaiôs mother speaks either Mandarin or Cantonese at home.

Matthew	4 ½ years old	▪ From an English-speaking family. ▪ Verbal but shy, quiet and did not express much verbally, communicated most with his favourite staff member(s). ▪ Left side of his body is affected, passive listener and rarely initiates conversation.

4.4.2 Clinical Notes

All the sessions were video recorded. As a matter of courtesy, I would notify the children that the session was to be recorded each time before the sessions began. The video recordings were used as ôaide-mémoiresô for me to review the sessions and assist me with reflections. As would normally happen in music therapy practice at the centre, the clinical notes referred to the therapistôs interventions and plans for future work, as well as recording the childrenôs responses, positions and possible mood changes. Any personal thoughts, feelings, reactions, and concerns from me were also noted in the same document, separate section at the end of each entry (under the heading: MTSôs reflections)[13].

4.4.3 Recruitment of Staff Members

The participating staff members had to be employed at the EICEC, to be working full-time there, and to have gained an early childhood qualification[14]. An announcement about the research was made in regular staff meetings, and eligible staff were approached by the Conductor of the Centre and invited to participate. The first two people who responded to the invitation were chosen as participants.

4.4.4 Interviews

Selected video extracts were shown to the two invited staff members, who agreed to observe and give their opinions on the progress of each childôs engagement in music therapy. Partial videos of the earliest and the latest sessions were selected randomly to avoid limitation and bias, and the interviewees were blind to the order of presentation.

[13] Examples of clinical notes and reflections can be found in appendix 7, p. 110

[14] Other staff members were employed at GSE as support workers, but they were assigned to work with certain children and for certain hours only.

The researcher conducted the interviews, which were based on open-ended questions prepared in advance and relevant to the aims of the research[15]. The interviews were as close to natural, informal conversation as possible. They were recorded, and participants were encouraged to comment on whether they observed any changes in the children both inside and outside the music sessions. Each participant was interviewed separately, and the interview was divided into two sections in which the participant watched a set of the childôs video extracts, this followed by the interview. As researcher, I was reluctant to take too much of the participantsô time after their day at work, all interviews were kept as precise as possible and this constituted an average of 30 minutes for each participant, including watching the videos.

4.4.5 Assessments of children's communication and socialisation

In order to show the differences in the childrenôs communication and socialisation development, an assessment tool was used to assess the children before and after the research period. There is no particular assessment tool that looks specifically at communication and socialisation criteria. However, the Assessment, Evaluation, and Programming System for Infants and Children (AEPS) can be used to assess relevant areas of child development in two different age groups[16]. The assessments were carried out, therefore, using the social and social-communication areas from AEPS[17].

The Conductor at the Centre volunteered to undertake the AEPS assessment for both children before and after the research period. Before he began, the Conductor and I had a discussion to choose the most appropriate age group assessment for each child. Although of similar age, they were of different ability levels; so a decision was made based on ability rather than age. The assessments were conducted according to the general observation of the conductor outside of the music therapy sessions. The first assessments were completed for both children at the end of July by the Conductor himself, and the second assessments were filled in by him in the middle of November with my presence, so I would have more understanding of his decisions in scaling the children. He also made comments on the appropriateness of the assessment tool, which will be discussed later in the study.

[15] Interview guidelines can be found in appendix 8. p. 113
[16] For birth to three years and three to six years
[17] An example of a filled AEPS assessment can be found in appendix 9. p. 114

4.5 Music Therapy Intervention

Although the study was focused on promoting communication and socialisation, the music therapy sessions were holistic, and tailored to the childrenôs ability, musical preferences, need and the desire to accommodate them in every possible way. As I had worked with the children before the study commenced, the structure of the music therapy sessions were kept similar to what they were used to, but still focused on enhancing communication and socialisation. Most of the sessions were planned and semi-structured with a óHelloô and a óGoodbyeô song. They usually included music-making interventions, singing and playing along to familiar and unfamiliar songs, and flexible improvisation and simple musical games to engage children and to match their needs. A variety of tuned and untuned percussion instruments, a keyboard and a guitar were used. The sessions took place in a small music room at the Centre and were 20-40 minutes in duration. The research was based on regular individual music therapy sessions, two sessions a week for each child for a period of three months. .

4.6 Data Analysis

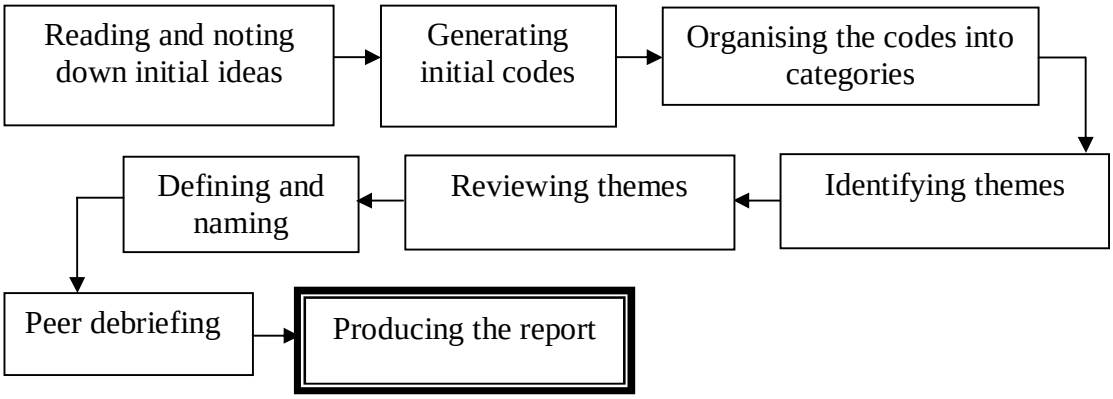
The objective of the research was to find out whether music therapy can promote communication and socialisation skills for children with CP that illuminate the essential meaning of what was taking place between the child and I during the music therapy sessions. To obtain some themes from the information so that conclusions could be reached, the data was analysed in the following way.

4.6.1 Analysis of clinical notes

To offer an accessible and flexible approach to analysis of qualitative data, thematic analysis seemed an appropriate approach to take in analysing the data for this study**.** It is a method for identifying, analysing and reporting themes within data. Braun and Clarke have stated that the advantages of a thematic approach are: (i) it allows flexibility, (ii) it is accessible to the researcher with little or no experience of qualitative research, (iii) the results are generally accessible to an educated general public, (iv) it can generate unanticipated insights and (v) it can be useful for producing qualitative analyses suited to informing policy development (Braun & Clarke, 2006). The coding process provided in Richardsô qualitative data handling practical guidelines (Richards, 2009) was used and peer debriefing with a student colleague occurred when the themes and categories had been worked out for each

interview. This was helpful to provide some neutral viewpoint, to challenge assumptions, and to verify ideas that had developed throught the analysis process. A sample of adapted phases of thematic analysis is provided in Map 1 below**,** and methods outlined:

Map 1: Phases of thematic analysis



Map adapted from (Braun & Clarke, 2006, p. 87)

1. The researcher read the session notes for each child thoroughly and highlighted observations that were relevant to the research questions.
2. These observations were organised into categories.
3. All categories were generated into themes separately for each child.
4. Unrelated findings were noted separately.
5. The organised themes that were found applicable to an individual child were given to a music therapist for peer debriefing.
6. The themes for each child were finalised.
7. Some similar themes used for each child were drawn together in the initial findings.

4.6.2 Interview analysis

The analytic method used for the interviews was similar to the process described for the thematic analysis above. However, the idea of interpreting the categories for the interview data was inspired by the review of Jonesô interviews analysis method (Jones, 2007). The analysis process is described below:

1. The interviews were recorded on a voice recorder. At the beginning of each interview transcript, filed notes were written; for instance the time and date of the interview.
2. The interviews were listened to again to arrive at as close a transcript as possible of what the participants had said, and the reaction of the interviewee. ôUmô and ôun humô were noted in the transcripts for clear understanding of the interview[18].
3. Member checking occurred. The transcripts were shown to the participants for verification. Participants were encouraged to add or delete or change any parts of the transcript they wanted. This process was to ensure they were happy with what was said.
4. The researcher read the transcripts several times and highlighted observations that were relevant to the research questions and participantsô comments and thoughts.
5. These highlighted observations were then reanalysed and organised into categories.
6. Themes were developed through each category.
7. Each sub-category was categorised into a main category.
8. Peer debriefing occurred. This was done with a second-year music therapy student who checked the analysis of themes with original transcripts and offered feedback and commentary. Minor adjustments were made according to the colleaguesô feedback.
9. Themes were finalised.

4.6.3 Analysis of AEPS

This section discusses the changes in the childôs performance before and after the three-month period, and looks into more specific changes in each subcategory. The assessments process was conducted as described below:

1. The assessments were completed by the Conductor of the Centre with present, to provide me with a better understanding of his decisions for scaling the children, and his observations relating to them.

[18] An example of an interview transcript can be found in appendix 10, p. 116

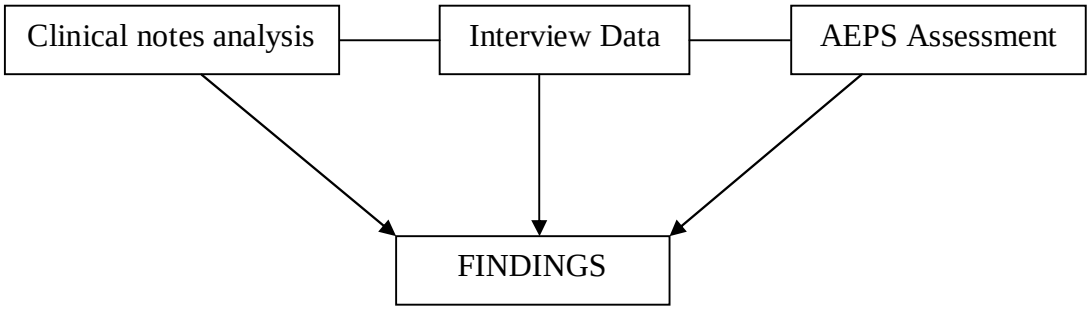
2. The overall results of the tests for each child were calculated by following the instructions stated in the assessment.
3. To Each subcategory of an individual area was calculated into a percentage so as to give a more precise reading, bring out differences, and allow a more thorough interpretation of the data. To compute the area percent score, the total amount the child gained is divided by the area raw score possible[19], then multiply by 100. In order to make the assessment more precise, each subcategory is completed with the same calculation method (*see* appendix 9).
4. A professional statistics consultant from Victoria University of Wellington was consulted regarding presentation of numeracy data.
5. Visual presentation of data was created to provide a better reading.
6. An easy and understandable explanation of numeracy was given along to the presentation.

[19] The raw score possible is calculated as if the child scored 2 for every individual score.

CHAPTER 5: FINDINGS

5.1 Introduction/ Overview

The following chapter has been divided into two cases: Case I: Zaizai; Case II: Matthew. Each case consists of three categories: Analysis of Clinical Notes, Interview Data, AEPS Assessment. After all, all the categories were put together to illustrate the findings.



5.1.1 Clinical notes categories

There were eleven set**s** of weekly music therapy clinical notes for each child. All the**se** notes were looked at carefully to answer the research question. Categories and themes were derived from the clinical note**s,** and relevant issues identified for both children.

i. MTS's approaches and techniques

This section includes the particular approaches and techniques that I noted in the clinical notes when having music therapy sessions with the children. Those approaches and techniques that appeared to be useful during the treatment process were carefully identified. These particular MTS approaches and techniques might serve therefore as important facets of the key question: i.e., how music therapy can promote communication and socialisation. However, as the two children have different levels of ability, themes that emerged will be in accordance with each childôs capabilities.

ii. Child's responses and initiatives

To ascertain whether the child was engaged with the music, particular responses were recovered. The emerging themes will be discussed in detail according to the childôs

participation. The particular responding patterns of the child have become significant while working with the child.

iii. Issues that impact on the child

Although this study centres mainly on communication and socialisation, the level of participation by children might easily be affected by other considerations as well. It is important therefore to be able to identify the factors impacting on the childôs participation during music therapy sessions.

5.1.2 Interview Categories

i. Music-enhanced communication and interaction

This section contains comments by the interviewees based on their observations of each child in the two video extracts that were shown. The interviewees supplied their perceptions of the way the child interacted and communicated with me verbally and non-verbally. All the key information was identified and emerged into several themes so as to give more specific ideas of the childôs participation.

ii. Music as enjoyment

This section includes observations from the interviewees as to how they believe music is valued by the child. Staff members think the children were having fun when attending music therapy sessions, and that it was something they enjoyed.

iii. Physical consideration

Although this study is focused on communication and socialisation, physical issues are also very important because they affect the way the child responds. To achieve the primary aim, therefore, it is vital to bear this question in mind when running the music therapy sessions. The interviewees talked of the physical abilities and limitations of the children, and made suggestions for consideration when working with children who have CP.

iv. Particular MTS's approaches

Participants discussed the particular approaches I used in the two video extracts shown. By attending a music therapy workshop held earlier at the Centre, the

interviewees had sufficient knowledge about music therapy practices and were able to identify the way I approached the child, as well as my music therapy approaches.

v. Interviewees' general observations

The interviewees commented on any issue that I did not cover in the interview, an opportunity for them to express their overall feelings regarding the two video extracts seen, and comment as they see fit on the particular childôs participation inside and outside the music room. I encouraged them to make general comments. They both regarded music therapy as a therapeutic tool and felt that it had been helpful in facilitating the childrenôs enhancement of their personal skills.

5.1.3 AEPS assessment

AEPS assessment allows professionals to gather assessment data for one child or a group of children in home- or centre-based settings. An assessment is divided into two sections, each designed for a different age group[20]. Each assessment monitors six key developmental areas in young children (fine motor, gross motor, cognitive, adaptive, social-communication, social): only the social-communication and social areas, however, were relevant to this study. Each area was subdivided into a progression of skills; and in the data recording forms, each item was scored by a professional as follows: 0 (does not pass), 1 (inconsistent performance), or 2 (passes consistently).

5.2 Case I: Zaizai

Zaizai is a five-year-old Chinese boy born in New Zealand. Both his parents are Chinese and they are running their own business in this country. Zaizai has two older brothers aged ten and eight, both of whom have had normal development. According to Zaizaiôs mother, she had a normal pregnancy when carrying Zaizai, but because her midwife clinically misinterpreted the timing of the delivery, Zaizai suffered the effects of lack of oxygen, and consequent brain damage, during birth. He was therefore diagnosed with spastic quadriplegia CP.

Zaizai has grown up in a Chinese-speaking environment. Cantonese is his parentsô first language, and Zaizai understands Cantonese but has minimal English. He was

[20] Birth to 3 years old, and 3 to 6 years old.

looked after by his grandmother from babyhood until he started attending EICEC. Zaizaiôs parents were introduced to EICEC by another parent who has a child with similar difficulties. They took him to be assessed by the Conductor at EICEC when he was three: he then began to attend EICEC three days a week. During his stay there, he usually had CE stretching exercises conducted by the team members, tacpac, time playing on the computer and standing in the standing frame, and rest spells in the sound box. Zaizai has supportive brothers who like to play with him at home, and a caring mother who spends most of her time looks after him. Zaizai enjoys playing with his brothers, and does not want to go to bed in the evening. He often stays up late as a result, he could not get up early in the morning and often late for school. His emotions are easily affected by the amount he sleeps, and by his health problems.

Because of his severe disability, Zaizaiôs communication is non-verbal, his movement is restricted, and he has vision impairment. His ability to express himself is limited, but he manages some communication by making noises, giggling, crying and smiling. These, and facial expressions, helped people at the Centre to understand to some degree what he was feeling**.** When stimulated or happy, he would stretch his body and lift his head up, leaning towards his left shoulder most of the time. He enjoys people praising him: either ódek zaiô (smart boy) or óden zaiô (handsome boy) would motivate him to do what people asked. Zaizai appeared to love music: his brothers played the violin and keyboard to him at home, and he often giggled and smiled when they did so. Besides, he enjoyed listening to recorded percussion music at the Centre, and this cheered him up if he was upset. He is sensitive to sounds and pitches, and greatly stimulated when he hears his motherôs voice or a similar intonation; presumably because of the nature of the language itself. The language challenge for Zaizai may then be an essential issue to take into account when working with him.

Zaizai did not receive any therapy apart from the music therapy service regularly provided at EICEC. Music therapy was therefore the only therapy he received for the year. As I also came from a Chinese background and was able to speak the same language as his family, this seemed to have had a positive impact on the intervention.

5.2.1 Music Therapy Student's Clinical Notes

Because of Zaizaiôs disability, his engagement in music was mainly non-verbal and many factors were taken into account in finding the right way to work with him. I used a variety of approaches with Zaizai, and those approaches were found to be of potential significance in stimulating his communication/vocalisation and interaction with me. Other issues also proved relevant in answering the research question.

i. MTS approaches and techniques

Apart from offering semi-structured sessions (beginning the session with the ôHelloô song, finishing with the ôGoodbyeô song), I worked from the premise that different children have different needs. My approaches were intuitive when working with Zaizai: when I looked back over the eleven-week period it became clear that there were several techniques that I had used regularly in sessions with him which seemed to change his engagement in music. These appeared to be consistent, and interrelated over time.

(a) <u>Using Appropriate Language</u>

Zaizai seemed to respond better when the language familiar to him was used; but I thought it would be helpful if he could adapt well in this English-speaking environment. I decided to challenge myself by introducing him to a simple English ôHelloô song containing only a minimal number of words. At first, he did not show any interest in responding, so I repeated it several times; but he was still not making any vocal sounds, or apparently reacting. In the next session, I had a Cantonese ôHelloô Song (*see* appendix 11): he smiled and gave a vocal sound which seemed to suggest that he was reacting more positively this time. The week after, I thought I would use both songs, to test his awareness of and response to language. I began with the English ôHelloô song and followed with the Cantonese version: he did not respond to the English, but smiled immediately when I was singing the Cantonese. I realised that language was definitely a major issue that would affect Zaizaiôs engagement in music, so decided to use Cantonese in the music therapy treatment journey with him.

(b) <u>Varying the Pitches, Tempo and Dynamic</u>

During the sessions, I used varied tempos and pitches to engage with Zaizai. As he has some visual problems, he seemed to be more aware of sound. He showed a

preference for high pitches so I tended to use the upper register of my voice, but I was aware of the importance of creating interesting contrasts. Every time I sang a song that had a high registered melody, he would make a loud vocal sound to respond to the pitches; otherwise, he would just smile gently. When I was singing and moving up the scale, he would inhale gradually along with my increasing pitch; and when I stopped at the highest pitch, he would make a loud and excited sound. Through that approach, I managed to keep him engaged in the sessions from week four and that led to consistent vocal interaction.

With the same philosophy, I often sang slowly to allow him to anticipate the contrast; and that frequently stimulated him and made him laugh when it came to the fast rhythm. He usually made some gentle vocal sound when the music was slow. However, by the time we had reached the end of the research period, his vocal responses had become more consistent, and he was managing to vocalise along with me when I sang at a reasonable pace. Through that approach, Zaizai appeared to learn to ñsingò together with me instead of simply responding to stimulus. Again, when I played on the drum with a contrast in volume, Zaizai would respond in the same manner. Later in the research period, he seemed to giggle softly when I played the drum softly, and loudly when I played it loudly. He appeared to be aware of matching his responses to my drumming.

(c) <u>Stopping and Waiting/ Silence and Space</u>

Stopping and waiting are part of music therapy techniques. From the beginning of the research period, therefore, I often paused after each phrase of the song I was singing and allowed Zaizai time to respond. As I wrote in my clinical notes for 4 August 2010: ñWhen I paused and waited for his responses, Zaizai smiled and made the sound ñerhò; then I continued to sing. Every time I paused at the end of each phrase, Zaizai would make a sound and smile in response to the music, and then I continued to sing again.ò My approach was to sing through the entire song once, and then the second time, when I repeated the song, I would stop after each phrase. Thus, I was able to ascertain whether or not Zaizai liked the song.

It seems from the clinical notes that Zaizai would respond in the gap if he enjoyed the song, because he usually smiled and giggled when he was responding. Otherwise, he

would stay quiet. An example is given in the clinical note from week five (1 September 2010): ñI started to sing a song to him. He looked calm and settled, but gave no vocal responses. He only moved his hands and smiled when I sang. He usually makes some noises when I stop after each phrase, but he didnôt at the beginning, only a couple of responses after a lot of trials. I only managed to get him to make vocal sounds a couple of times.ò By repeating this approach in my sessions I seemed to familiarise Zaizai with my intention; as later in the second half of the research period, he was responding much more consistently and seemed to understand what I was looking for.

(d) Repeating

Repetition is often important, because the best way to help Zaizai understand or become familiar with the intervention was to keep repeating the pattern so that he would learn what was expected of him. By using this approach, he could be motivated to participate in and enjoy the music. Nevertheless, I needed to remember that the amount of repetition should never become excessive, as over-repeating may have a negative effect (less interest in initiating interaction, and starting to feel bored), which was reflected on in the notes on several occasions. This is something which therapists have to think about often, and with previous experience it was obvious, during these sessions, when to stop.

(e) Gentle Humming

Coulson (2004) has suggested that gentle humming may encourage the child to try to match the sound, and that this is especially true when working with non-verbal communication clients. In my work with Zaizai, I found that I often hummed along to encourage vocalisation. As Zaizai is non-verbal, words sometimes made the situation even more complicated: so through humming, I observed that he increased his self-awareness, be being more motivated to respond, initiated non-verbal conversation and managed to copy. That was how we established the therapist-client relationship.

(f) Imitation

Bunt has stated that imitation can serve as an immediate way of establishing some connection with a child (Bunt, 1994b). As Zaizai usually cooed when he was happy, I would imitate him to make him aware that I wanted to initiate some contact with him.

At first, he would wait awhile when he heard me copying him then start making a sound again. If I continued to copy him, he would sometimes vary the pitches. He usually either ended up laughing, or gradually stopped making sounds if I continued to copy him. Zaizai seemed to pick up the pattern fast: in the first session of the research period: we were copying each other back and forth for two minutes. Yet, a lot of silence occurred to allow time for him to respond. He appeared to be conscious of his ability to copy and to ócontrolô my vocalisation, because over the eleven weeks, his responses seemed to be quicker and the pattern of the way he vocalised changed when more vowels were involved.

(g) Flexible Improvisation

Flexible improvisation was often essential in my work with Zaizai. Although most of the songs and interventions were planned, his responses could vary each time I saw him. To encourage and motivate him, I often improvised to acknowledge, and make him aware of, his participation. I wrote in the clinical notes that when I praised him by speaking Cantonese to him for being able to hit the djembe, he appeared to make a sound in response to that. I did not know how much he could understand, but he was definitely appeared to be conscious of my singing.

ii. Child's responses and initiatives

With Zaizaiôs severe physical disability, he seemed to have a pattern of responding. From the data analysis of the clinical notes, the way he responded was mostly the same, but the degree of response varied. Thus, his responses were divided into four main kinds which might help to establish how music promoted his interest in communicating and interacting with me.

(a) Changes in Meaningful Responses

At the beginning of the research period, Zaizai was not interested in responding and interacting with me: his participation was mostly passive. I needed to prompt him to make a response by singing and playing enthusiastically: at this stage, however, he showed little or no apparent willingness to make any kind of vocal sound. Gradually he became familiar with my approach and particularly in week four, he was very engaged throughout the session, making lots of vocal sounds and responding to the song far more than before where I believed we have built a good relationship.

Sadly, the following week, Zaizaiôs involvement lessened. He became quieter and demonstrated less interest in responding to the intervention; but still stayed calm and listened to the songs. However, he might be demonstrating increase in autonomy as he became more engaged when he found it interesting listening to my breathing. When I inhaled, he started to make some sound, and when I exhaled, he giggled. He appeared to be responding to my breathing, which he must have been listening to attentively.

Zaizaiôs responses gradually became more meaningful and seemed to be more connected with my utterances. For example in week nine, session fifteen, when I was singing ñlalalaò, he tended to say ñahò, and then I acknowledged him by singing ñyou are a clever boyò in Cantonese, to which he responded ñunò straight after me. It was as though he was responding to my call: almost a question and answer situation. It seemed that we have established communication partnership because he seemed to understand what I said, but was simply making a sound in response. This was indicated when I sang the ógoodbyeô song: he was now able to make the sound ñarò when I stopped and waited for him to give some kind of farewell. At the end of the research period, Zaizai was able to respond constantly during the gap, copying the sound I made for nearly three minutes. He even joined me and we ñsangò together.

Instead of responding vocally from week nine, Zaizai demonstrated particular interest in playing the keyboard. When I first introduced him to this, he was not especially eager to play with it; in the next session, however, he seemed to be more comfortable in exploring it and started to touch the keys randomly. To help him to become aware that I was supporting him, I tended to expand and challenge the communication by responding vocally to his keyboard playing. He seemed to understand that I was making a connection with his music: every time he played a note, I would sing that note, and he was constantly playing for me to vocalise. That intervention lasted approximately twelve minutes the second time, when I offered him the keyboard to play with. When watching the video recording of that moment, I felt it to be a very meaningful development. My instinct was that it would be appreciated if I could notate the melody Zaizai played, arrange it into a readable melody, add lyrics and dedicate it to his mother (*see* appendix 12). I presented the song at the end of the research period, on the day of the EICEC music concert; and received positive

feedback from staff members and parents, all of whom seemed to view it as a meaningful piece of work with Zaizai.

(b) Physical Communicative Responses/ Gestural nonverbal communication

Children with CP have very specific difficulty coordinating their movements. This was certainly true in Zaizaiôs case, so integrating vocal and physical responses could be really challenging for him: thus it was an important area of work. Although Zaizai was placed in the standing frame, on the beanbag or in the reclining chair when he had music sessions, the work I did with him seemed to be encouraging connections between his voice and movement, especially when he was in the standing frame. This is because with the rhythmic support, Zaizai was motivated to communicate through music, and the stimulation appeared to connect with his motor movement.

As recorded in the data, from the beginning Zaizai would turn his head from left to right and smile at me. He did not show much physical response. From week four, however, I realised he was starting to move his arms, lift his head, look around and smile happily during the session. When he was stimulated, he would straighten both his legs and arms together while making a vocal sound, and lift his head upright, usually leaning to his left. He tended also to look at the wind chimes when these were offered for him to play with, and he would reach out to play the chimes simultaneously when they were placed in front of him. I would usually sing to encourage him to go on playing, whereupon he would hit the chimes and start giggling.

The following week, however, Zaizai showed less interest in playing with this instrument. When I asked him to play the chimes, he reached out to do so, but finally was not inclined to play and remained passive. On the other hand, I noticed he became more interested in forming the vowel shapes with his mouth. When I was singing a vowel, he would eventually form its shape, but without any sound coming from him. His formation of the mouth shape of the vowel was consistent; it seemed as though he was eager to learn to speak. For the last few weeks of the music therapy sessions, Zaizai appeared to be able to turn his head gently to where I was, seemingly with the idea of reaching out and playing the instruments again. He seemed to be more relaxed in himself, and his body was certainly much more so.

(c) <u>Spontaneous Vocalisation</u>

Zaizai tended not to vocalise at the beginning, and appeared uninterested in doing so. He remained quiet in the session, but would give tiny grunts. In order to promote communication and socialisation, I took any opportunity to increase his vocal confidence. I tried to copy the way he vocalised and slowly we began to have non-verbal interaction which lasted about two minutes as below:

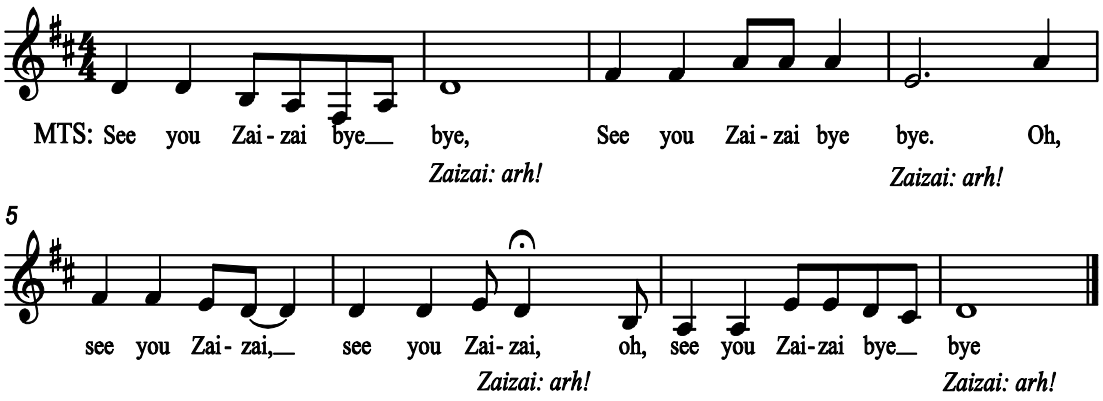
Zaizai : ngué .
I : ngu ngu~~~~ ngu
I : ngu ngu~~~~ ngu
Zaizai : ngué
I : ngu ngu~~~~ ngu
Zaizai : nug~~ e~~~
I : e e~~~ e
Zaizai : ngué
I : ngu ahé ah
Zaizai : ahé
I : ahé .
Zaizai : ah~~ ah
I : ahé .
I : ahé .
Zaizai : eré
I : eré é é ah~~~~~~~ ah
Zaizai : ngué é
I : ngu ngu~~~~ ngu
Zaizai : ngué .
I : ngué .
Zaizai : ngué .
I : ngu gnué
Zaizai :nugé .oh
I : ohé é é .
Zaizai : ngué *(etc)*

His response was not spontaneous, and I worked hard to facilitate his response, but from that point he was responding consistently, and at the same time he allowed for turn-taking during the interaction. Progressively, over the research period, he increased the length of the possible vocalisation from two to eight minutes.

In weeks three and four, Zaizai demonstrated spontaneous vocalisation every time I paused in the óHelloô song waiting for him to greet me. Moreover, as I often sang and played at the same time, he was consistently reaching out to hit the chimes when I offered them to him, and ñsingingò while playing. He might have been taking his cue

from me. In week five, however, Zaizaiôs involvement changed. He was not interested in vocalising and would not make a vocal sound even when I paused and waited for his response; and he took another week to pick up the skills again. Zaizai tended to vocalise when I sang in a funny way by using my voice differently, and he appeared to be trying to imitate me by singing at the same pitch. He became more spontaneous, especially after each phrase when I was singing the ógoodbyeôsong (Notation 1):

Notation 1: Zaizai's spontaneous vocalization



Before the term break, he managed to make a vocal sound in response to me every time I called his name. His vocal responses seemed to be consistent and spontaneous at this stage. After the term break, moreover, Zaizai was showing no decrease in spontaneous vocalisation. At the end of the research period, he even tended to vocalise while playing the keyboard.

(d) Facial Expression and Contact

With Zaizaiôs physical disability and vision problem, it was hard for him to initiate any sort of contact. Most of the time when he was told he was having a music session with me, he seemed happy and smiled readily. His apparent pleasure, however, made no difference when it came to getting him to actually participate in playing. I tried several songs and instruments to motivate him to interact with me, and he finally reacted to my drumming and started giggling. Occasionally he would turn gently to look at me but did not lift his head up if he was in the standing frame. Over the research period, he progressively showed more willingness to make contact with me by raising his head, looking towards where I was, and smiling and giggling more

often. And when he was told it was time to finish the music, he would drop his head and look sad. Sometimes, he was crying when he was taken out of the music room.

iii. Issues that impact on the child

As is clear in the analysis, I felt a good deal of concern about other issues that affected Zaizaiôs engagement in music. It seemed as though his participation was fluctuating in degree, but when he was not engaged with the music there was always a reason of some kind.

(a) Health issues

As Zaizaiôs mother would often say when talking to me, Zaizai was easily affected by extraneous circumstances of one sort or another. If he did not have adequate sleep, he would find it hard to concentrate the next day when he attended the Centre. If he was overtired, he would be very quiet and prefer not to be involved in activities. During the eleven weeks, Zaizai was often feeling unwell, and he was even sent to hospital because of breathing problems. After coming back from hospital, especially, his involvement in music changed, and I started to wonder why he was not engaging as before. I tried to find ways to solve the problem, and at last realised he was still recovering from his illness: he certainly had little energy and less interest in doing things. As it happened later in the research period, he did show some positive changes in the music sessions.

(b) Understanding of Languages

As mentioned in the section covering the MTS approaches, Zaizai understood Cantonese better than English. At the beginning of the research period, I often wondered whether he could understand me or not. I tried out several ways to test his understanding. First, I used to sing the English ôHelloô song where he did not show any response, then I changed the ôHelloô song to Cantonese, whereupon he smiled and made vocal sounds. Thus, I ended up singing him the Cantonese ôHelloô song. During the sessions, I also introduced him to songs in Mandarin, as Zaizaiôs mother claimed he did listen to some Mandarin childrenôs songs. Although Zaizai might have found similarities in intonation, Mandarin was definitely not the language he understood the best. His response to the Mandarin songs was inconsistent, especially those that were new to him but responded better to the familiar songs.

In order to find the best way to work with Zaizai, I prepared Cantonese childrenôs songs for my sessions. Even when those I had were ones he was unfamiliar with, Zaizai would often smile and make gentle vocal sounds when I was singing, and he responded better when I paused after each phrase. However, he took a while to respond to the Mandarin songs, even when I waited for his responses. Thus, being able to speak or sing in the same language as his family was important, because that helped to stimulate his interest in participating and interacting with me.

(c) Seating Arrangement

Over the eleven-week period, Zaizai was placed in different sitting positions during the music therapy sessions. His ability to move his body also depended on the way he was seated. As mentioned in the clinical notes, when Zaizai was in the standing frame he would lift his head upright when the music stimulated him and move his head around to find the instruments. He did not like to be in the standing frame, especially, when he had his ankle foot orthotics on, or when he had already been there for some time before the music session. On the other hand, when he was placed on the beanbag, he had more freedom to move his arms and legs (although he still considered having spastic movement), but did not find it so easy to turn his head. Furthermore, the beanbag was soft and adjustable, so when Zaizai was stimulated, he would straighten both his legs and arms and gradually slip down from the beanbag and needed to be repositioned. While this would not interrupt the flow of the session, it was still very frustrating for me to have to do that.

When Zaizai sat on the reclining chair, he seemed to use both his head and arms well, as he managed to turn around and reach out towards the instruments. It was not so supportive for his back, however, he normally twisted his body to the side and straightened his limbs totally when he was stimulated. There was always some difficulty for Zaizai, so I often altered his seating when he attended the music sessions so that he would not become annoyed by a certain position and could maximise his involvement in music.

5.2.2 Interviews

Two interviews concerning Zaizai have been analysed together and the following categories were decided upon to the data that derived:

i. Music-enhanced communication and interaction

(a) Responses

Both interviewees agreed that Zaizai responded by making different sounds. Interviewee A claimed that Zaizai seemed to have the same responses in the earlier video extracts whereas he showed slightly varied responses in the later video. On the other hand, Interviewee B noticed Zaizaiôs responses became more consistent and timely in the later video and thought that was not a coincidence but a genuine improvement. According to a speech language therapist from the Ministry of Education, Zaizaiôs responses were definitely purposeful and he was trying to imitate the way I articulated the vowel (Trass, 2010).

The interviewees realised that when I allowed space and waited for a response from Zaizai during the intervention, he would take a little time to think, so as to be able to fill the gaps by making appropriate sound responses. The interviewees believed that he was aware of the approach I was taking:

> *"I thought he just responded more purposefully and he was actually waiting for you to pause." (ZA15-17)*[21]

> *"...you give him time to recover and to come back but you have to continue and then Zaizai has a turn and he knew it is his turn." (ZB50-51)*

During the interview, Interviewee B noticed Zaizai was imitating particular vocal responses from me and claimed:

> *"...the way you made the sound, because, one of them was like 'ah ah ah' (open vowel), the other one was a little bit, a little bit more close, and he did… follow it!" (ZB66-68)*

(b) Communication Interaction

This section contains information about the particular way the child interacted with me vocally. Interviewee B thought Zaizai was definitely using his voice to

[21] The first capital letter is the initial of the childôs name, the second capital letter indicates the particular interviewee, and the number supplied is the line number from the interview transcript.

communicate, that he was trying to interact with me by making high and low vowel sounds, and that he was also imitating my pitch. He believed that Zaizai was aware of his turn and that he understood the ógameô, which was turn-taking with vocalisations. While Interviewee A had the same opinion, she thought Zaizai was trying to respond non-verbally when space was given.

In addition, Interviewee A pointed out that Zaizai was singing with me during the music in order to interact with me, and seemed to be looking more towards where I was and was looking for me instead of just making a vocal response:

> *"...he lifted his head and he seemed to turn more towards you...it seemed to look like it was more purposeful towards you when it got to the part for you to pause." (ZA45-49)*

When asked whether Zaizai showed interaction with me, Interviewee B was very certain with his answer and replied:

> *"Absolutely! Absolutely, there is no doubt about it! ...you see on his face like he is expecting, he is expecting the turn or that part of the song to come and then..." (ZB66-76)*

ii. Physical Responses

In addition to musical and vocal responses, Zaizaiôs body responses constituted one of his ways of expressing himself. Because of the severity of his disorder, his physical responses are considered to be part of his communication. Stamenovic (2009) has mentioned any changes in the clientôs movement and facial expression which the therapist reflected by way of music allowed the client to discover and develop his/her own way of communication by using a non-verbal method.

Interviewee A emphasised that Zaizai expressed himself consistently by arching his back to the right and by turning towards me. Presumably, therefore, looking or turning in the direction of me was a significant physical response for him:

> *"...he just showed he enjoyed the music in both of them by responding and smiling, laughing and arching his body" (ZA24-25)*

> *"...he seemed to be looking more toward where you were and is actually looking for you, rather just making a response..." (ZA38-40)*

> *"...he responded by arching his back, laughing and smiling ... when he smiled he turned toward you and made some, and tended to make sounds as well..." (ZA54-57)*

Although the other interviewee did not constantly draw attention to Zaizaiôs physical response, he agreed that Zaizai had more ófreedom to moveô during the musical intervention. This might be because Zaizai was stimulated which aided his physical movement, and was therefore using his body as part of the communication:

> *"... he is using his body and his voice in communicating, he needs freedom for that and that will be typical for children with physical disability." (ZB145-147)*

iii. Music as enjoyment

Both the interviewees explained their perceptions concerning Zaizaiôs enjoyment of the music therapy sessions observed.

(a) <u>Enjoyment</u>

During the sessions, Zaizai showed that he enjoyed the music by responding non-verbally, smiling, giggling and arching his body in both the video extracts shown. Therefore Interviewee B thought that music really does motivate Zaizai, and that it is a meaningful tool for him to express himself.

> *"...because music interests him, is meaningful for him, is a good motivation..." (ZB122-123)*

(b) <u>Facial Expression</u>

As music interests Zaizai, he would almost certainly show some enjoyment through his facial expression. He seemed happy in the two video extracts, and often responded

by smiling at and laughing with me. Interviewee A stated that when Zaizai smiled, he would turn towards me, which suggested that he was making some eye contact with me.

Zaizai was not only smiling and laughing, but also showing different facial expressions during the music sessions. Interviewee B felt it was obvious that Zaizai was expressing himself differently through his face:

> *"...you see on his face like he is expecting, he is expecting the turn or for that part of the song to come and then..." (ZB75-77)*

iv. Physical consideration

With Zaizaiôs severe physical disability, positioning him correctly is a major consideration it is vital not to overlook.

(a) <u>Seating arrangement</u>

This section explains the way the child was being positioned during the sessions shown in the two video extracts, and how the interviewees thought the position might affect his participation. Interviewee A was aware that Zaizaiôs ability to turn might be due to his seating arrangement, as he had more ability to move when he was standing in the standing frame, but she did not further elaborate her thoughts and concerns during the rest of the interview. Interviewee B, however, who as the Conductor of the Centre has much experience handling children with the same or similar physical disabilities, kept emphasising from the beginning of the interview what Zaizai could and could not do in different positions. When asked to comment on the order of the two video extracts, he thought the second video, where Zaizai was placed on the beanbag, was the later one because Zaizai reacted more consistently, much more spontaneously. However, he felt that might be due to the different seating arrangement because Zaizai was in a less restricted position in the second video extract:

> *"Well, if he was better on the second one, might be the positioning made a difference..." (ZB29-31)*

When asked whether Zaizai showed engagement in the sessions, he argued again that although Zaizai was engaged in both video extracts, his participation was different and that might be because of his seating arrangement. He also stated that different positions could affect Zaizai in many ways; and that a given position allowed him to achieve only a particular task.

> *"His way of breathing and making sound would be, will be always affected by his position. [in an upright position in a standing frame]…in a certain position he won't be able to produce certain sounds… I can put Zaizai in a position where he will only be able to cry. …and he will lose all the skills that he had…" (ZB92-100)*

He then gave some examples that he observed from the video extracts:

> *"…a couple of times and again more on the first one because of his positioning (in the standing frame) it was… you see you see like it's coming, it's coming, it's coming and then it came. He was a little bit slow and then we have to or you have to be [there] for him, but it came. The second one (on the beanbag) was more… I think he… but if you call it like how he prepared thing, like it's coming coming coming…then came. But it was much easier, I… I think it's because of the positioning" (ZB75-83)*

(b) <u>Alternate position</u>

This section focuses on the aspect of positioning Zaizai in order for him to continue to develop and acquire different functions in the future for specific tasks.

Interviewee B suggested it would be more convincing if Zaizai were placed in different positions during the music sessions. If his engagement remained consistent, that would mean that position need not be a concern for his participation. As music holds strong interest for Zaizai, and is seemingly a meaningful intervention for him insofar as it motivates him to vocalise, it would be an interesting finding to explore different positions with him to find out whether his level of engagement varies. Interviewee B suggested:

> *"...the next step would be like, he had a freedom, he has the way of expressing himself but then we want to make the next step like, you know alright let's try this in sitting or standing position"... (ZB112-115)*

> *"...if you wanna, really want to engage with Zaizai, is easier if he has a... not much restriction!" (ZB121-123)*

iv. MTS's particular approaches

Because they had attended the music therapy workshop I had presented at an early stage, the interviewees noticed some approaches I used in the two video extracts that proved successful in my work with Zaizai.

(a) <u>Techniques</u>

As I always paused and allowed space and silence while I waited for a response from Zaizai, he became aware, through those repetitive and consistent approaches, of when his turn had come and would anticipate my pause as well. He would then give a vocal response in reaction to me:

> *"...because the first one you have to stop at least once where he was waiting, waiting and... and wasn't... and then you you you give him time to recover and to come back but you have to continue and then Zaizai has a turn and he knew it is his turn." (ZB46-51)*

I also imitated the way Zaizai vocalised, and extended it by vocalising in different pitches, vowels and sliding my voice from an upper to a lower note. And eventually, Zaizai followed me:

> *"...the way you made the sound, because, one of them was like 'ah ah ah', the other one was a little bit, little bit more close, and he did... follow it!" (ZB66-68)*

> *"... you made a different sound, the high 'ah ah ah' down to the low..., he did, he did...he did follow it." (ZB58-61)*

(b) <u>Connection</u>

Apart from the music therapy intervention, Interviewee A noticed the connection that Zaizai and I had during the music sessions: he not only responded in the silences but also sang with me during the music. The interviewee was amazed with the connection and said:

> *"...really neat to see the responses that he made and the connection you had with him and him with the music." (A82-84)*

v. Interviewees' general observations

Although the interviews were about perceptions gained by the interviewees from the video extracts, it was also important to allow them to express or talk about any further feelings, experiences, observations and comments.

(a) <u>Changes in musical participation</u>

During the interviews, the interviewees were asked to comment on the changes that they noticed during the music intervention. Interviewee A believed music therapy had a definite impact on Zaizai, but she thought children change from time to time and it was hard to distinguish where the changes were coming from. This comment seems entirely valid, because in a transdisciplinary environment every single effort would make a difference to a child. However, she realised that Zaizaiôs responses seemed to be more frequent, and that there were subtle changes to be noted in them:

> *"...I mean children change all the time so it's hard to pinpoint where the changes are coming from…but I certainly see a lot more, he responds a lot more to people's voices, and to music…" (ZA63-70)*

However, Interviewee B had a different perception of the changes. He thought Zaizaiôs responses would vary in a different environment, but that he was definitely very responsive to music. Interviewee B felt no one would believe Zaizai could respond in the way he responded in these, because his responsiveness in other environments was completely different. He would even happily accept something like standing in the standing frame, which annoyed him mostly, when he was having his music sessions with me.

"Eventually he wasn't happy in the frame mostly, as he gained more function, he had less concern with his physical issue to be [of being] in the frame..." (ZB179-183)

Furthermore, Interviewee B thought Zaizai had gained some ability to cope with the situation, and he considered that a big change for him:

"...he gained... some function, some reason to be... to be there, and it's all good things happening while he's there, he's enjoying it...
... so that's, that's a big change." (ZB195-201)

(b) <u>Music therapy as a therapeutic tool</u>

Interviewee B, however, strongly believed in music therapy and thought Zaizai was definitely benefiting from it. He was very disappointed because he thought people lack knowledge and expectations with regard to music therapy, and the work carried on with Zaizai is the best evidence that he should receive a grant in order to have such sessions:

"... well probably a child like Zaizai, not many people, you know I can imagine ACC or other therapy was asking Zaizai [condition] but not many of them [have] seen him in this type of really... [optimum] really responsive...
..., I don't think they guess, or they think Zaizai can respond the way how he responded in there...
...it's probably lack of expectation, lack of knowledge for that purpose..."
(ZB150-167)

"...and that's why [I'm] very surprised that ACC said music therapy is not a therapy because there is no proof, but that's the proof" (ZB166-167)

(c) <u>General comments</u>

When the interviewees were asked whether they could identify the earlier and the later video extract, they gave different opinions:

> *"...could be quite hard to tell, I personally thought he responded more in the first one, so I'm hoping that was the later one, and the second one was the earlier one" (ZA9-13)*

> *"I think the... I think the second one his reactions are more consistent in the second one...he, his actions for the music were much more consistent, much more timely than the first one..." (ZB9-17)*

While it might seem from what the interviewees said that there was no difference between the two video extracts, the responses probably indicate that different people have different perceptions. Both interviewees agreed that Zaizai appeared to be happy, enjoying himself, engaging with the music and showing interaction in his sessions with me.

In general, Interviewee A recognised that Zaizai had been responding a lot more to peopleôs voices recently, and she was emotional when she saw what he could do and the way he responded in the music therapy sessions. She was amazed by the extent of his response, and by his connection with me and the music.

> *"...I mean I don't think anyone can look at those videos without feeling something especially if you know Zaizai, without feeling, how, you know how... a little bit emotional about him because it's just really really neat to see the responses that he made and the connection you had with him and him with the music. ...and I certainly felt something there." (ZA80-86)*

According to Interviewee B, Zaizai appeared to be happy no matter what position he was in, and he (Interviewee B) was aware of what the little boy could do in different positions. Although Zaizaiôs communication is still non-verbal, he has made major progress in interacting and communicating with people during his time at the Centre. Interviewee B thought the result is significant:

> *"...that's why very surprise like ACC said music therapy is not a therapy, because there is no proof, but that's the proof!" (ZB166-167)*

ñ*Probably six month ago, [the length of time for Zaizai to stand in the standing frame] was really limited. When we put him in… in that (standing frame), Zaizai was not happy and not smiling. [But] these days I take Zaizai out [off the standing frame] is not because he's tired but because I know his has been standing there for an hour so that's… and that's understandable because he gain… some function, some reason to be… to be there, and it's all good thing happening while he's there, he's enjoying it… that's a big change!" (ZB193-203)*

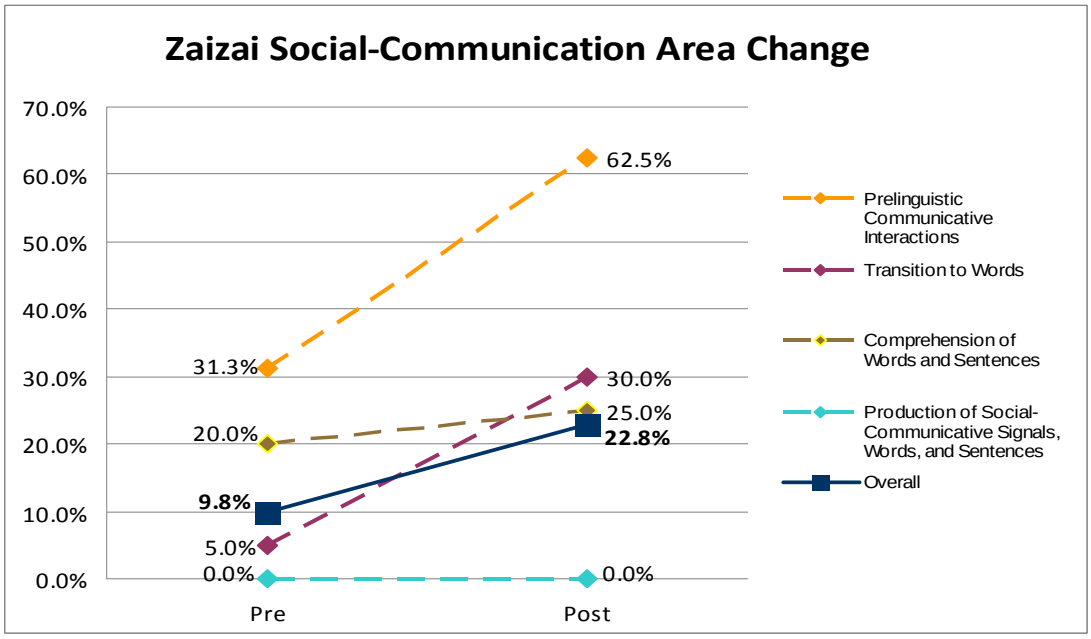
5.2.3 AEPS Assessments

According to the diagnosis of Zaizaiôs condition, his development is not on a par with his chronological age group. The decision was made therefore to use AEPS assessments on him from birth to three years, looking at the social-communication and social areas.

i. Social-Communication Area

This area covers prelinguistic communicative interactions, transition to words, comprehension of words and sentences, and production of social-communicative signals, words, and sentence strands. The following graph shows the extent of Zaizaiôs social-communication area changes (Graph 1).

Graph 1 : Zaizai Social-Communication Area Change



According to the graph above, there was a striking improvement in Zaizaiôs prelinguistic communicative interactions (31.3% to 62.5%), transition to words (5% to 30%), and comprehension of words and sentences (20% to 25%). There is no improvement in the production of social-communicative signals, words and sentences strand. Overall, Zaizai improved from 9.8% to 22.8%.

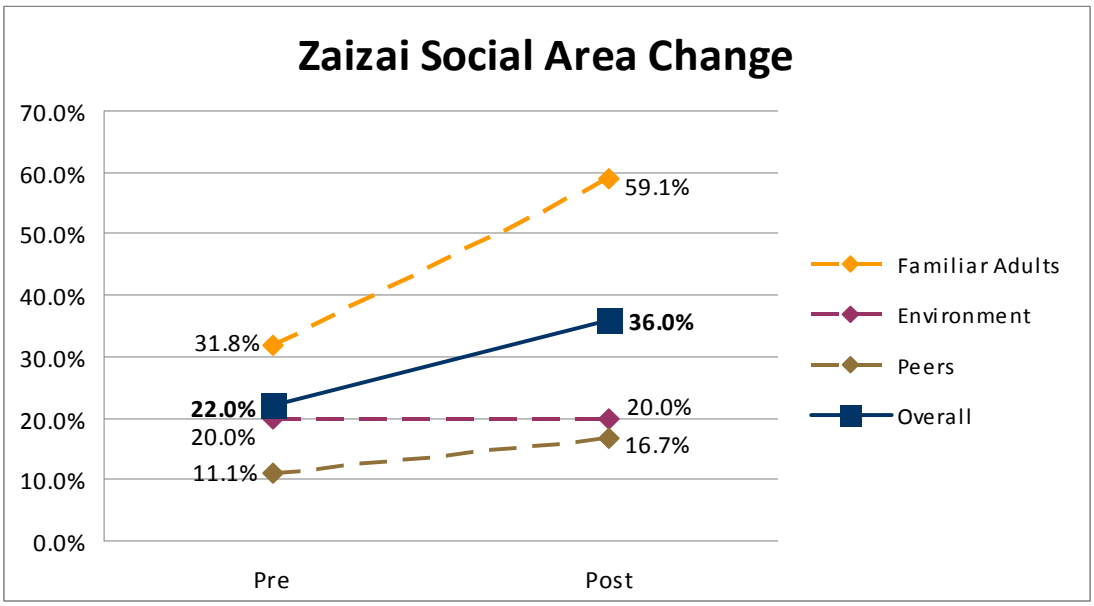
We see then that Zaizai showed dramatic progress in the prelinguistic communicative interaction strand, which increased by 31.2%. With regard to Zaizaiôs data assessment form, he showed consistency in turning and looking towards the person speaking to him, and he managed to engage in vocal exchanges by making garbled sounds. The second highest improvement is evident in the transition to words strand, where Zaizai had improved by 25% over the three-month period.

There are two sub-areas in this strand, which are (1) gaining a personôs attention and referring to an object, person, and/or event, and (2) using consistent word approximations. In keeping with the diagnosis of Zaizaiôs condition, his speech and language skills are extremely limited; therefore the Conductor felt the second category should not be applied to him. He thought, however, that Zaizai is definitely more aware of personal attention, objects, people and/or events. Zaizai showed a 5% increase in the comprehension of words and sentences strand. As this strand is indirectly linked to some physical issues, and to Zaizaiôs physical disability, he is not able to achieve some of the goals, therefore showing no spectacular improvement. Lastly, the Conductor suggested the production of social-communicative signals, words, and sentences category should not be applied to Zaizai because with his disorder he is unable to achieve any of the goals from that category, and that is the reason he scored 0% both before and after the assessment period. However, Zaizai demonstrated an overall increase of 13% in the social-communication area.

ii. Social Area

This area encompasses Zaizaiôs interaction with familiar adults, environment and peers. The following graph shows the result of Zaizaiôs social area changes before and after the three-month period (Graph 2).

Graph 2: Zaizai Social Area Change



It can be seen that Zaizai showed improvement in interacting with familiar adults (31.8% to 59.1%), peers (11.1% to 16.7%), but no improvement in interaction with environment. He demonstrated an overall improvement of 14% (22% to 36%).

It is significant that Zaizai interacts better with familiar adults (where he showed an increase of 27.3%), than with peers (only 5.6% improvement). This might be due to the fact that the children from the Centre have the same or similar disabilities, so it is hard for them to initiate interaction with peers. Adults from the Centre, on the other hand, are mostly the people who are helping him, so he might get used to those who approach him regularly. With Zaizaiôs difficulties, it is a major challenge for him to participate in established social routines himself and meet his physical needs in socially appropriate ways. In summary, Zaizai had improved by 14% in his social area assessment score after the three-month period.

5.2.4 Summary and Triangulation of Analysis of Data Sources

The key ideas that emerged can be categorised according to three main areas:

- Communicative Interaction
- Integrating voice and movement
- Interacting with familiar adults

i. Communicative Interaction

Although Zaizaiôs progress fluctuated in the middle of the research period, and was certainly affected by his physical and health difficulties, it was found that his communication appeared to increase during the eleven weeks. Studies suggest that when working with children with CP who are experiencing communication difficulties, it is best to modify the music therapy model to one inspired by the ideas from parent-child interaction while working with the child (Colle, 2003; Gilboa & Roginsky, 2010; Pennington, 2008). In the studies cited, this particular technique was adapted to encourage initiation of communication, and it gradually led to more purposeful communicative interaction. Through gentle humming, Zaizai became more aware of his participation, imitating the particular pitches and vocal sounds I made and anticipating responses from me. Zaizai was showing an increase in the length of his spontaneous musical interactions which increased from two minutes to eight minutes. The vocalisation may have given him confidence in his ability to cope with interacting, and a willingness to communicate. This links with the statement that Coulson made on the effectiveness of vocalisation (Coulson, 2004). It also signified that the relationship between Zaizai and the therapist was established through the process.

During the research period Zaizaiôs communication not only became more spontaneous, but he developed some other skills as well. He managed to join me in singing a long, and he attempted to form the vowel shapes that I was making. The speech therapist working on site believed that the way Zaizai formed his mouth as demonstrated in the video extract was purposeful and intentional (Trass, 2010). Each single approach or technique I used in the music sessions seemed to be beneficial, because Zaizai was becoming more aware of his responses, showing the potential of imitating and learning new skills. Results from the assessment also indicated that Zaizai was showing an improvement in prelinguistic communicative interactions: his engagement in vocal exchange and his ability to turn to the person who was initiating conversation with him had become consistent. Thus, it seems that through music therapy, Zaizai**'s** ability to communicate was enhanced, and music is certainly embedded in non-verbal communication.

ii. Integrating Voice and Movement

The clinical notes and interviews data found that Zaizai was not only displaying his ability to reach towards the instruments; he was also able, when stimulated and motivated to interact by approaches from me, to lift his head, turn to me and make a vocal response all at the same time. As well as this, he also demonstrated the ability to multitask by vocalising and playing on musical instruments, which is a big challenge for a boy who has severe physical disability. The three data sources from the findings provide evidence that music is not only able to enhance communication; it might also help children who have involuntary movement to take control of their body movement in some way and integrate it with the use of their voice.

According to Coulson (2004), body movement can be an important purposeful interaction from non-verbal children thus it is not necessary always to seek for vocal responset when working with non-verbal children with CP. The findings indicated that Zaizai was not only responding through vocal sound but also integrating his body movement by straightening both his upper and lower limbs when he was stimulated by the musical intervention. Bean has stated that through the musical therapeutic process, a childôs inner attitude to his/her body can be enhanced and the realisation awakened of some self-control being a possibility (Bean, 1995): and all this would certainly seem to be true in Zaizaiôs case.

iii. Interacting with Familiar Adults

As mentioned in Chapter Three it seems that regardless of the approaches taken by the therapist, the most important consideration was to establish a therapeutic relationship with clients. By working consistently with Zaizai for a period of time, he became familiar with my approaches and knew what I was expecting from him: as the interviewee said, *ñ...he gained... some function, some reason to be... to be there...ò*. The connection between Zaizai and I was established naturally through our music-making: he became comfortable about sharing his music with me as a result of our singing, playing and making music together.

Significantly, it emerged from the AEPS assessment that Zaizai appeared to interact more with familiar adults than with his environment generally, or with peers. As was strongly in evidence during his sessions, he demonstrated consistently appropriate

responses to a familiar adultôs affective tone, smiled in response to a familiar adult and responded to communication from him/her. As one of the interviewees stated: ñ*not many of them [have] seen him in this type of really… [optimum] really responsive…,… I don't think they guess, or they think Zaizai can respond the way he responded in there…"*; which showed that Zaizai was comfortable interacting with me in the music room. This indicates that regular sessions and consistent approaches by the therapist are essential, especially when working with a child like Zaizai; as they can contribute significantly to building the therapeutic relationship. According to the triangulated data, music appeared to motivate and stimulate a lot on Zaizai as music therapy provides a secure and comfortable environment for him to express himself within his abilities. Besides, he was able to predict what would happen during the music therapy sessions and be aware of what was taking place with the musical interaction.

5.3 Case II: Matthew

Matthew is four-and-a-half, and appeared to be very shy. He comes from a loving family with two parents, an identical twin brother and a younger sister who is nearly one year old. Both parents are European, his father English, his mother Dutch; but they have been in New Zealand for many years. English is the main language used in the family: although Matthewôs mother sings and speaks simple Dutch to the children, their Dutch speaking skills are limited.

Matthew and his brother were born prematurely in the 30th week of the pregnancy cycle. He is diagnosed with spastic hemiplegia CP due to a lack of oxygen to the brain during birth. The left-hand side of his body is affected, so his left hand and leg are weaker and his movement restricted. Thus he was mostly either sitting on his wheelchair or standing in the standing frame as he is immobility. Matthew was referred to EICEC from a New Zealand hospital when he was three. He attended EICEC three days a week and spent two days visiting school because he was going to transfer to a mainstream school this year (2011). This is a major concern for his parents, even though Mathew is physically disable, he is not considered as a very high needs student therefore Matthew is not eligible to have a teacher aid to support him when he goes to school. Consequently, the situation would be challenging for him and

his family as he has to be independent, not to rely on anyone to assist him most of the time at school.

Although Matthew is able to speak, he rarely does so, according to the description given by staff members at EICEC. This was especially true when he started attending the Centre because his mother was naturally protective and would tend to interpret for him. He was therefore not very confident interacting and communicating with people, especially someone new. He preferred to work with a particular staff member when attending EICEC, and that made it harder for people to initiate conversation with him: he would usually withdraw if people did not immediately understand what he said, or when he was unable to answer the question asked. Apart from attending EICEC and school, Matthew spent his leisure time playing with his sibling and watching different cartoon programmes such as *Thomas the Tank Engine, Fireman Sam, Dora, The Wiggles, Bob the Builder*, etc., at home.

The Conductor at EICEC designed a specific routine for Matthew according to the degree of his physical abilities when he attended to the center. he would have oral-motor function intervention, CE stretching exercises, practice walking with the walking frame facilitated by the staff, group and individual music therapies, learning to be more independent by getting his lunchbox and feeding himself, and story reading to increase his abilities and independence when he goes to school. Besides, Mathew also started learning how to operate his new motorised wheelchair so that he can operate it smoothly when he goes to school.

Three weeks before this study began, Matthew had a hip operation intended to improve his potential for walking and prevent the hip from dislocating. He was in the hospital for a week and spent two weeks resting at home: during that time, however, Matthewôs mother brought him to the Centre for a short visit. When he came back to EICEC on a regular basis, he was mostly sitting in his wheelchair because he was not allowed to put too much pressure on his hips; but attendance at the music and movement sessions at EICEC appeared to be fun and encouraging for him in rehabilitation where he seemed very engaged and was happy to strength his upper and lower limbs in a musical way (any therapies undergone placed no physical strain on

him) and also helping him coordinate his body balance, where he found that it was hard to sit upright without support from the sides.

As Matthew is funded by the Ministry of Health and the Ministry of Education, he also had other types of therapy at EICEC: speech language therapy, occupational therapy, hydrotherapy. To assist Matthew in speaking more effectively, I managed to gain some information from Matthewôs speech therapist. Even when he was overloaded with his schedule and had become extremely tired, he still liked to volunteer sometimes for an individual music therapy session**.**

5.3.1 Music Therapy Student's Clinical Notes

Matthew attended a total of eleven weeksô music therapy sessions with me. The clinical notes included all the detail of what had taken place in the music therapy sessions, such as I described his moods, the props we used in role-play, and other issues that might have affected his participation, as well as my reflections. Each clinical note was read carefully in order to establish the precise meaning it had had during the sessions; and themes, to be discussed below, were arrived at for each category.

i. MTS Approaches and Techniques

When separating the themes into appropriate categories, I realised the consistency of me using certain approaches and techniques when working with Matthew and they seemed to affect the way he responded, and his engagement in the music. I decided therefore to discuss the main approaches I had used with Matthew in the sessions, and cross-over approaches might be found, as they are all interconnected.

(a) Choice-making

As Matthew is verbal but shy, the best way to get him to say something at the beginning was to ask either simple yes or no questions, or a question requiring a short answer in response to a choice offered. During the sessions, therefore, I often offered him a few instruments to choose from, asked him which musical activities he preferred or a simple question such as who should lead the playing, and so on.

At first, Matthew would not respond to all of my questions and offers. He often looked down and withdrew into himself when I asked him to choose. Even when he answered, he would do so in a single word, or by pointing. However, it is evident from the clinical notes that the consistency of allowing Matthew choices empowered him to move comfortably and spontaneously from a single word by way of response to answers involving a complete sentence. For instance, in the Spider game[22] we developed in the sessions, it was only at the beginning of the research period that Matthew would simply say his or my name when asked who was going to be the spider. After four weeks, instead of just giving a name, Matthew would say ñIôll be at home and youôll be the spider.ò

(b) <u>Improvisation</u>

Flexible improvisation is a common approach used in music therapy with young children (Wigram, 2004) As discussed in the literature review, an improvisation technique gives the freedom to express oneself, and spontaneous musical interactions support the developing therapeutic relationship (Warren, 1997). Improvisation was often used in Mathewôs sessions.

The use of improvisation in the sessions occurred usually when I was accommodating Matthewôs choice in music or acknowledging his participation. In the first session, however, Matthew found it unnatural to hear the spontaneous singing or music I made, because when I did this he tended to look puzzled and would stop playing. This might be because of his family background, where the amount of control exercised means that he rarely has the experience of being able to express himself freely in the way that I did. Nevertheless, he seemed to adapt well in improvising after the first sessions because when he came back for his second session, his engagement during improvised music changed. When we were playing on the fish ocean drum, I asked him where fish swam. He did not answer, but looked at the drum and gently tilted it up and down. While we were playing quietly on the drum, Matthew suddenly said that it sounded like rain, and we had this interaction:

[22] In the Spider game, we both wiggled our fingers as spiders in different directions on the keyboard. Either Matthew or I would go to catch the other personôs hand, so the spider who was being chased needed to escape by running around on the keyboard until caught.

Matthew : raining.

I : Yeah, it sounds like raining doesnôt it? Is it raining outside?

Matthew : Yes!

I : Ohé this makes a raining sound.
(improvised) Raining, raining, itôs raining outside. Raining, raining, itôs rainingé .,

Matthew : In the drum!

I : *(singing)* In the drum!
Good on you!

I was amazed by what Matthew said because I was not expecting him to say anything. Although the conversation was short, he was able to express his thoughts and responded at to the improvised song. After that he started to demonstrate creativeness and self-expression in his therapeutic journey and in his connection with me, because he became more willing to share, i.e., to speak out.

Over time, Matthew grew in confidence; improvising became natural for him. While we were role playing later in the research period, he would improvise by chanting the action that he was doing while I played on the guitar to accommodate his chant. Being able to express himself by chanting was a significant development for him during the research period although he was not ready to improvise with some sort of melody either on the tuned instruments or vocally.

(c) Repetition

I believe that as you become used to something you acquire competence in it, so repetition is important irrespective of whether or not you are dealing with children who have special needs: it is part of the learning process. Repeating certain songs or activities was useful in encouraging Matthew to participate.

It is apparent from the clinical notes that I tended to repeat the interventions quite often. However, instead of keeping the intervention exactly the same, I realised that Matthew and I would modify the intervention naturally, in accordance with Matthewôs response and degree of engagement. Matthew enjoyed role-play during the sessions, and often asked to have it again and again. He could play the same character

five or six times; for me, however, it became boring, so I would try to provide a bit of variety in the role-play by adding a different instrument, sound as a siren, or a pretended tool of some kind. In that way, there was always something new, yet it was possible to keep the framework the same. Thus Matthew gradually increased his conversation with me by telling me my role in the role-play and suggesting what we could do during repetitions.

(d) Allowing him to lead

Referring to the notes, I see that Matthewôs closest education support worker (ESW) at the centre had suggested that allowing Matthew to have control over something helped to stimulate his communication and interaction with others. That was why Matthew enjoyed playing with her, as she always allowed him to have what he preferred yet was still able to achieve her own goals with respect to him. From my experience and reflection as recorded in the clinical notes, I strongly agree that allowing Matthew to take the lead was a way to enhance his communication and socialisation. This needs to be handled with care, however, so that there is no overstepping of the boundaries between therapist and client.

From the start of the eleven-week period, I allowed Matthew to suggest what we could play in the sessions, and gave him the opportunity to call when to start and stop the music. At first, he often needed cues and guidance from me as to when to do this: it was clear, however, that he enjoyed taking the lead as it gave him control, and his participation when leading became consistent. As we often took turns in leading certain interventions, Matthew became used to the pattern whereby we each had a turn as leader. As is reflected right through the clinical notes, Matthew showed no sign of overstepping boundaries: by the end of the research period, however, his leadership role was happening naturally and spontaneously.

(e) Role-Play

As Matthew enjoyed watching different cartoon programmes, he naturally had his favourites among them. In the second week of the research period, I began to chant the theme song for *Bob the Builder* (ñCan we fix it!ò) when Matthew was able to find the right button to play from the keyboard whereas I was still a little uncertain how to operate it. Matthew corrected me by saying ñI can fix it!ò, and that was a spontaneous

response from him. From that incident, I knew that I could include more of his favourite cartoon characters in my session to help to enhance his communication by role playing.

In the third week, I started introducing him to *Postman Pat Special Delivery*. As soon as I began the *Postman Pat Special Delivery* theme song, Matthew looked at me in surprise. Then he began to act as Postman Pat when he says ñGoodbye, Ben!ò[23]: he pressed one of the keys on the keyboard and pretended to be taking off in the helicopter, also making the sound of the helicopter (ñfffffò). In that role-play, I asked him what he was going to deliver, accompanying that with the theme song as background music: he took a while to think about it and answered ñbouncy castle and telescopeò. The intervention seemed to be fun and enjoyable for him, because he kept asking to do it again and again.

Over time, I introduced other cartoon characters that could be suitable for role play in the sessions; for instance, Bob the Builder, Lunar Jim, Super Sleuth and Fireman Sam. To make the role plays even more entertaining, I included props and missions to help achieve the primary goal. Matthew appeared to be comfortable in initiating contact with me: he would give me an actual role during the role-play so that I was not simply the ñbackground musicò person. In Week Nine, which was after the two-week term break, he asked me if we could role-play when he came into the music room; and when he found that I had not got the props ready for him, he asked where the helmet and coat for Fireman Sam were. Through role-play, he developed communication skills by asking, sharing and initiating conversation. He also tended to be more creative during role-play because he would use the sticks as a hose for Fireman Sam, the wheelchair he was sitting on as the Scooter for Luna Jim, and the keyboard for the helicopter: these creative, imaginative ideas were coming from him spontaneously during this exercise. Role-play was fun, and something Matthew enjoyed and was knowledgeable about; so he was confident in communicating and interacting with me. I believe it helped establish a good relationship with Matthew, and led him to trust me, as we were sharing an interest.

[23] Ben is one of the characters from the óPostman Patô programme.

(f) <u>Child-centred and intuitive</u>

In order to keep Matthew engaged, my approach needed to be child-centred, playful and enthusiastic; and that is why I included lots of game-like activities such as role-play to stimulate his interest in communicating and interacting with me. This was a highly important approach in working with Matthew. As he is a quiet and shy boy, I needed to be playful and funny to attract his attention and interest him in interacting with me. At the beginning, however, I mainly accommodated him musically through whatever cue he gave.

I used animated facial expressions to interact with Matthew which seemed to be engaging for him as he smiled readily. In the last two weeks of the music therapy session, I became ñsillyò occasionally in my approach: I would do this intuitively, for example call his brotherôs name instead of his in the óHelloô song: he would start laughing and tick me off for being so ósillyô. Another example was when he asked for a particular tool for the role-play, I would purposely give him the wrong one, and he would say ñAh! Noé not that oneò spontaneously, in an appropriate tone and with a smile on his face. The playful and flexible approaches worked well in that environment: it would seem that Matthew was happy to have music therapy sessions with me, as by the end of the research period, he was stroking my hair and looking at me gently with an affectionate smile.

ii. Child's responses and initiatives

Matthew used different ways to express himself during the music therapy sessions. His emotional expression could be in words, or through facial expression. His participation and engagement in music were described in detail in the clinical notes and will be discussed according to different aspects within each theme.

(a) <u>Communication</u>

At the beginning of the process, Matthewôs communication was considered passive. Although he would suggest what to play during the music sessions, he had no real reaction, positive or negative, to my suggestions from me. When asked to choose an instrument to play, he used to say the name of the instrument only: his communication was brief, and to the point. After the first two music therapy sessions, Matthew showed a slight increase in the length of his sentences: he was managing to say ñI'd

be the spider and youôll stay at homeò twice in the session, and sentences like, ñletôs play the spider gameò, whereas he would only say ñspider gameò in the first week.

After seven weeks, Matthew started to use his voice freely by using different pitches and varying the volume of his voice in an appropriate situation. He shouted ñFIRE!ò loudly in a high register when he heard the sound of the horn blowing, as this was supposed to signal the fire alarm. He even told me what he thought I needed to be saying: ñNo, you need to say, what is that sort of noise?ò when I was asking who was making the noise that woke me up. Eventually the length of his sentences seemed to increase, and he was happy and not withdrawing when I asked him to repeat them**.**

After the term break, I was concerned that Matthew might show some decline in interest: however, he tended to maintain his communication skills and was initiating conversation with me freely. This was indicated by the fact that when I started singing ôBob the Builderô, he immediately objected: ñI havenôt got my tools or my hat onò. Once he had his tools he was ready, and initiated conversation with me in the role-play:

I	: What are you going to fix today?
Matthew	: Piano. I need torch light to check!
	(I passed him the torch light and he checked on the piano. Once he was done…)
I	: Can you fix my bell please? *(showing him the "broken" bell)*
Matthew	: Oh no!
I	: *(Crying)* Can you fix it for me?
Matthew	: Of course! I have to check. *(I passed him the bell)*
I	: *(crying*) Can you fix it for me? *(I couldn't get what he said at the first time)*
Matthew	: First, I have to check!
I	: Oh! You have to check!
Matthew	: Yes! *(Checking the bell)*
I	: Is everything going alright?
Matthew	: Yes! *(Using the torch light to check the bell carefully)*
I	: Oh, what do you need?

Matthew : Hammer please, thank you.

It was a big challenge for Matthew to maintain such a conversation, as he had to multitask by checking and answering my questions. During the conversation, he was able to suggest what to do, show empathy, explain what he was going to do, repeat what he had said and request help.

By the end of the research period, he seemed to have no fears about expressing himself. He was using words and sentences like ñReady, steady, goò to indicate to me when to start, ñI have had enough saving fireò, ñWe need more hosesò, ñCan we play Super Sleuth?ò, ñIôm going to be Super Sleuthò, ñNow letôs chase each otherò, óIs there any mission in it?ò when I gave him a mission envelope, and so on. His communication appeared to be more spontaneous and proactive.

(b) <u>Participation and responses</u>

Matthew tended to sit and listen quietly to the óHelloô song. I needed to repeat the song at least three times in the first week to help him to respond[24], and his response, which he gave only once, was very soft. He used to look away when he was unable to answer my questions, and he took some time to respond to my musical invitations; however, he showed a quick response once I suggested playing the Spider game, and he was fully engaged during this activity.

After the first week, Matthew was able to sing ñHello Cocoò twice in the óHelloô song, and made eye contact when he was singing. He got into the habit of playing the keyboard after the óHelloô song, so he would always ask for permission to do this once the song was over. He began to play and explore the buttons on the keyboard and we worked together to find out how to operate it. During the Spider game, his responses became more spontaneous and apparently excited, but when I asked him a question, he would quieten down and withdraw into himself. When it came to the óGoodbyeô song, instead of singing good-bye to me, he preferred to strum on the guitar. However, he was aware that I was going to see him not ñnext timeò (part of the lyrics), but ñnext Mondayò. ñNext timeò as he saw it, was the weekend, and he did not

[24] The Hello Song for Matthew encouraged him to lead by singing back Hello to me: material from the Nordoff-Robbins collection. See Appendix 13, p. 125.

come to the Centre then, therefore he corrected me by singing ñgood-bye until the next Mondayò instead of ñnext timeò.

Gradually, Matthew became more positive about playing the keyboard. In the early stages he had never touched the keys when we were playing the Spider game, but in time he would play a few of them and copy the way I was playing. He even started improvising by singing ñdoom doom doomé ò when the spider was jumping on the keyboard. We extended the game with things like building a gate, knocking on the door, inviting each other over for tea, etc. Matthew often laughed and shouted excitedly when I nearly caught him; sometimes if he did not want to be caught, he would make an excuse by hiding his hand and saying ñIôm not home!ò. Then I would knock on the door and ask whether there was anyone there. He would respond simultaneously ñNo! Iôm not homeò, and laugh.

When it came to the middle of the research period, Matthew was demonstrating different ways of participating. He would pretend he was driving the fire engine, sing at a fast or slow rhythm, display even greater enthusiasm role playing, anticipate his turn, express his opinions and make the sound of different engines. If he did not want to finish his music sessions, he would pretend to be asleep. Surprisingly, later in the research period, he agreed without hesitation when asked to perform *Lunar Jim* on the day of the Centreôs music concert. He even included actions for *Lunar Jim* when we were practising it. He became more active in the music sessions, swaying his body along with the music and creating movement for the songs. He was able to sing the entire óHelloô song (*see* appendix 13) softly by himself at the end of the research period.

(c) <u>Facial Expression and Contact</u>

Matthew is a polite, obedient child, and hardly complains about things he has to do. He looked happy when he attended his music sessions with me. Obviously, he was shy in the early stages, and would smile only occasionally. He often had a blank expression, and it seemed as though he was not concentrating at all. He seldom looked at me even when I asked him a question. Although he appeared happy and enjoyed the sessions, the degree of warmth he displayed towards me was inconsistent.

In the third week, Matthew started to use gestures to indicate where he was going to be for the Spider game. He watched carefully and followed me quietly, waiting to catch my hand, and smiled trickily when he nearly got me. He started to laugh in the sessions and would make good eye contact with me. What astonished me was that later in the sessions, he would look into my eyes especially in the óGoodbyeô song, smile gently, hold my hand and even stroke my hair. According to Matthewôs closest ESW at the centre, Matthew does that only when he really likes a person; and she was one of those he especially liked.

iii. Issues that impact on the child

There were some minor considerations that impacted on Matthewôs engagement in music. Although he seemed to be having fun, in some circumstances right through the research period his participation and the flow of the sessions could be affected.

(a) Transdisciplinary Work

While it was wonderful for Matthew to have a variety of therapies, one needs to be understanding of keeping the time when working in a transdisciplinary environment so each therapist would have enough time and space to see their client. As Matthew and I attended the Centre on a certain day, it was important that I have music with him on the day we were both present. Because other therapists were also working with Matthew, however, time was always a major consideration for us. Often a therapist came either before Matthew had had his music session or while he was having it. It was always hard for me to know whether to take Matthew before or after his therapist came, or simply to work at my own pace even if the therapist turned up.

Even after a good deal of routine activity at the Centre and a session with his therapist, Matthew would still volunteer for music. He would be happy to have it, but as he was often overtired and finding it hard to concentrate, the quality of the session diminished: also, by that time, his guardian had usually arrived to pick him up. On occasion, when I was halfway through a session, either the therapist would knock on the door to tell us that he/she had arrived, or a staff member would come in his/her place. This would interrupt the flow of what was happening, and Matthew would be aware that his therapist was waiting for him: inevitably, then, I had to finish early. Sometimes the session only lasted ten minutes, whereas usually we would have at least a twenty-five-

minute spell. In a transdisciplinary environment such as this one, Matthew would simply be overloaded; and because he was physically tired, this would indirectly affect his engagement in music. It is nonetheless important for the music therapist to be able to find the right time of the day to have the music session.

(b) Lack of Confidence

At the beginning, Matthew tended to turn away, especially when I asked him a question he was unable to answer. The flow of the sessions was often interrupted because of that, and then he would be shy and unwilling to explore things with me. To minimise the possibility of him withdrawing, specific techniques needed to be applied, such as asking him a simple question that he could answer easily, or questions to which there were no right or wrong answers. In this way I was able to build up his confidence in engaging in reciprocal conversation with me. I tended to use the kind of activity that he was comfortable with in the music session, such as a games-like activity that would facilitate willingness to share his experiences with me.

Matthew told me that he was sharing his musical experiences from our sessions with his brother, and suggested that I use the same activities in music spells with my daughter. Later, in week nine, the clinical notes stated that Matthew got annoyed and withdrew if I kept asking him to repeat what he was saying, he would get annoyed and shut up. However, now he would be happy to repeat what he said again and again until I could understand him. According to the clinical notes, Matthew gradually seemed to become more verbal and the number of words and sentences spoken by him increased. He began to share experiences with me and other staff members, or with his family, over the eleven weeks.

(c) Seating Arrangement

Matthew was placed in his wheelchair for most of his music therapy sessions. He was able to make good use of this, treating it as a fire engine when playing Fireman Sam. He was also able to move around in the music room to find the things that I was asking him to find. Therefore, having him sitting in the wheelchair seemed to be appropriate, and he was free to be actively involved in the activity. However, particularly in week nine, Matthew was encouraged to have music while standing in the standing frame. The reason was that he needed to strengthen his leg muscles, as he

had not been exercising his legs much since undergoing surgery. He did not seem happy to have to stand in the standing frame while having music: halfway through an intervention, he said that he wanted to sit in his wheelchair, and began to cry. I realised it was hard for him to use his upper body effectively and difficult for him to concentrate, and the flow of the session was interrupted while he was moved out of the walker. He had been prepared, however, to say openly what he needed.

5.3.2 Interviews

Two interviews concerning Mathew have been analysed together. Themes were derived according to Mathewôs ability to participate, and to engage in musical activity in the two video extracts that shown. One of the video extracts involved a third person, and which this may contribute some different points of views of the interviewees. The following categories were found to be applicable:

i. Music-enhanced communication and interaction

As Matthew is verbal, he is able to express his needs in the sessions. The interviewees commented on the way Matthew formed sentences and communicated with me in the two video extracts watched. All the information was divided into several themes to give more specific ideas of Matthewôs participation.

(a) <u>Responses</u>

In the two video extracts that were shown to participants, Matthew demonstrated ability to use longer and more complicated sentences than was usual for him. As this was something that did not normally happen at the Centre outside the music sessions, the interviewees were pleased to see how I accommodated Matthew and motivated him to initiate conversation and respond to me spontaneously.

> *"[Mathew is]giving [a] lot lot more verbal responses and initiating the conversation a little bit more … (MA62-64)*
> *…he's responding much quicker and lots more spontaneously." (MA128-129)*

> *"…there is more spontaneous communication from himself then …*
> *…he did the framework, he did respond to you all around what you gave him, you accommodated his need more…" (MB150-155)*

As well as responding verbally, Matthew gave excellent responses musically. He worked collaboratively with me on the keyboard by pushing the ñstartò and ñstopò button by listening to the cue from me. He even used different voice patterns and dynamics to respond to the content of the musical intervention.

> *"...he probably has more variety of... he has he has a pattern of voice you know..." (MB194-197)*

> *"...because of the difficulty of Cerebral Palsy, he is lucky, he is able to speak and understand them (language), to play with his voice... and then to be loud and quiet..." (MB199-202)*

(b) <u>Communication Interaction</u>

Although others were also in the room observing or participating in the sessions, Matthew showed a willingness to communicate with them as well. During the interviews, both interviewees expressed the same idea that Matthewôs communication became more spontaneous, and that there was clear reciprocal communication between the two of us.

Interviewee A drew attention to Matthewôs ability to initiate conversation, and to the way he communicated. She thought Matthewôs verbal responses in the video extracts that were shown were longer and a little more complicated. She also thought that Matthew was able to maintain the conversation a bit more than before:

> *"...he was using much longer sentences, more words for sentence and there was lot more contact with the other people in the room." (MA11-13)*

Interviewee B had a similar view, but he tended to focus more specifically on Matthewôs actual communication. He saw this as very much a two-way phenomenon, to a significant extent dependent on the way I initiated conversation and approached Matthew, allowing him to communicate more spontaneously and comfortably and giving him the freedom to make his own choices. The conversation within the framework enhanced the communication:

"... really clear reciprocal communication like you know, when... it went both ways." (MB78-79)

"... the communication was more specific and clear... clearer expectation and and and you ask him to do things within timely [a specific timeframe]." (MB101-104)

(c) <u>Musical participation</u>

As Matthew is considered ôableô physically, he managed to play the keyboard in a reasonable way; making use of his right hand, for example, during the process. According to the two video extracts, which demonstrated different kinds of musical involvement, both the interviewees identified a particular moment on the video when Mathewôs keyboarding skills were being challenged. Both interviewees thought that playing on the keyboard especially involved operating the keyboard, keeping rhythm and beats constitutes ôproperô music playing: but this is a view not always held in the therapy field.

"Matthew seemed so familiar with the button on the keyboard and how he operated..." (MA5-7)

"... he was quite focused on the technical side of getting the keyboard operated..." (MA23-25)

"...the second one was clearly about timing, synchronising..." (MB25-26)

"...more receiving on the Bob the Builder part...
... and more participating on the... keyboard part" (MB64-65)

With regard to that particular moment, the interviewees also commented that with the guidance and support from me, Matthew was able to achieve the tasks in question. I allowed Matthew to lead by counting down and eliciting his help in operating the ôstartô and ôstopô buttons on the keyboard. From that, Matthew was able to anticipate his turn and indicate to me when to start and stop the music:

"... waiting to give the instruction and the counting down..." (MA27-29)

"...controlling the music and the timing..." (MB44-45)

"... he was able to control stopping, stopping, starting..." (MB51-53)

"You know you give clear indications and clear directions...
...Matthew's physical skill let him, he did follow that..." (MB82-85)

"...you let him lead as much as he was leading..." (MB106-108)

ii. Music as enjoyment

This section deals with the perceptions of the interviewees regarding Matthewôs response to music, and the way he expressed himself, particularly in the two video extracts.

(a) <u>Enjoyment</u>

It is possible that their different educational qualifications and positions at the Centre resulted in slightly different perceptions on the part of the two interviewees. It is noticeable that one interviewee focused a lot more on how Matthew enjoyed his music with me, whereas the other drew little attention to óhaving funô[25] with me, although he was aware that Matthew enjoyed his sessions.

Interviewee A said that Matthew looked much more relaxed and smiley, especially in the video extract where he was role playing with me. She reaffirmed that Matthew enjoyed the music as well, and seemed to be having a great time with me in music-making:

"...it's obviously [having] an impact on him, means a lot to him and something he really enjoys." (MA107-108)

[25] Although óhaving funô and óenjoymentô appeared to be the same meaning, the words óhaving funô in this context mean there is no educational purposes or other intention behind the activity.

> *"I thought he seemed more relaxed and less… in the second one, less concerned with getting things right or wrong. He was just having fun I think." (MA72-74)*

(b) <u>Facial Expression</u>

The interviewees believed Matthew enjoyed having music with me because he looked happy in both video extracts shown. Furthermore, he was clearly prepared to initiate contact with me, as he would look up at me and make eye contact. This may be an indication that Matthew and I had established a good relationship where Matthew was no longer shy and withdrawn when approached:

> *"…he would look up and, and make great eye, eye contact." (MA43-45)*

> *"…you know you see his face like he interacted with you by looking." (MB19-20)*

> *"Well I know he was more relaxed and smiling in the in the second session one…" (MA94-95)*

Matthew was not only expressing his positive feelings but was also able to show different (positive and negative) facial expressions. From the interviewees' statements, it seems that Matthew was showing a good deal of expression:

> *"…you could see that in his face he was struggling with that (hat) and struggling with the camera…, once he got that right, you know, he was lots more relaxed and free and he could express himself more." (MA80-84)*

> *"…you see his face in the second one, but it was a different purpose in mind…" (MB58-60)*

iii. Physical consideration

Matthew was sitting on his wheel chair in both video extracts. The interviewees did not therefore draw attention to the seating arrangement for him, but his physical ability to play to any extent.

(a) <u>Physical ability</u>

The interviewees held different perceptions regarding Matthewôs physical ability. Interviewee A thought Matthew was quite distracted by trying to get the hat on his head right, and that that eventually put him off a bit during the music session. She definitely thought that was a distraction for Matthew, as it was hard for him to achieve the task.

> *"...obviously with physical distraction for him coz that was difficult for him to put on." (MA80-82)*

In contrast, Interviewee B did not apparently see that as an issue because he did not even mention it in the interview. He believed Matthewôs physical skills facilitated his achievement of the tasks in the music session.

> *"...physical skill let him, he did follow that..." (MB82-85)*

iv. MTS's particular approaches

During the interview, the interviewees were able to notice the methods I demonstrated in the two video extracts and were able to verify them.

(a) <u>Techniques</u>

Again, the interviewees did not seem to have the same perceptions, but they were able to identify different approaches that I employed, and somehow their statements do show some connection. It was uplifting to gain feedback of this kind from one interviewee:

> *"... using the hammer to make music with, which is I thought was a, a lovely way to add in the, to blend in the thing he is interested in, the Bob the Builder with making the music as well." (MA33-36)*

From the above statement, it is clear that music-making can be flexible and that there is no set rule. By using things that Matthew likes in order to accommodate his tastes in the music, the therapeutic process could be enhanced. Not only might that happen,

but using communication techniques such as asking direct questions and giving an opportunity to choose, allowed Matthew to initiate conversation and connect with me.

Interviewee B was very specific about the techniques that I applied in the sessions, and he was aware of my approaches. He mentioned that I was improvising to accommodate Matthewôs needs, allowing a sense of play in the session, giving him freedom to play with a little guidance from me, but no intrusion:

> *"... you improvised to his liking and to his activity..." (MB15-20)*

> *"... it was clearly about timing and [the] synchronising together thing, you have expectations towards him..." (MB34-30)*

> *"...more open type [of play] ... I know it was guided, and you guided through..." (MB116-119)*

> *"...you made the strategy, making him [stay] with the strategy..." (MB106-108)*

(b) <u>Connection</u>

The literature chapter drew on the importance of establishing a relationship between the therapist and the client so that the therapeutic process can be successful. With respect to this, Interviewee B mentioned some relevant points which are very important in the therapeutic process. He argued that Matthew appeared to trust me, as he showed no hesitation in allowing me to lead him:

> *"...it showed like you know he trusted you!" (MB139-140)*

> *"he let you lead him ..." (MB144)*

v. Interviewees' general observations

Several aspects were raised when giving opportunities for the interviewees to express their overall feelings about the two video extracts, as well as any thoughts relating to observation of Matthew in day-to-day activities.

(a) <u>Changes in musical participation</u>

It seemed that Matthew had made progress in extending the length of participation as a result of music therapy. The interviewees were certainly aware that he had become more responsive during the music sessions. Even when having group music together with the other children at the Centre, Matthew seemed engaged and responded spontaneously without prompting, whereas before he would draw back when people approached him during the group music therapy sessions.

> *"...his responses when we do group music, he's responding more now where before he might have sat and listened or waited for somebody actually physically move his hand or, and you know prompt him to make a response. Now that he, if we pause, he would make that response..." (MA110-114)*

> *"...it makes a big difference for Matthew and I think it's a... a great thing." (MA131-133)*

Furthermore, when time and space were given to Mathew, he would respond in the space given and even when dealing with something that was unfamiliar for him. Interviewee A was of the view that although Matthewôs spontaneous responses could not be compared with those of most children in his chronological age group, he was responding much more quickly and spontaneously than before. She thought children with CP need more time to process things, so Matthew was definitely responding much faster and a lot more spontaneously at his own level:

> *"he would fill in the word or even in a song he hasn't heard before..." (MA119-120)*

> *"...but for him, he's responding much quicker and lots more spontaneously." (MA124-129)*

(b) <u>Music therapy as a therapeutic tool</u>

Interviewee A believed music therapy had made a big difference for Matthew, and said:

"...it's obviously [made] an impact on him, means a lot to him and something he really enjoys." (MA106-108)

"...obviously music therapy, from [what] I've seen, it makes a big difference for Matthew and I think it's a... a great thing!" (MA131-133)

(c) <u>General comments</u>

When the interviewees were asked whether they could identify the earlier and the later video extract, they had different opinions:

"...Matthew seemed so familiar with the button on the keyboard and how he operated, I thought that set may have been the later one but I changed my thought' later on, I decided the second one was the later one." (MA5-9)

"I think the first one was the later one and the second was the earlier one." (MB31-32)

Interviewee B noticed Matthewôs communication had become clearer and more spontaneous, and that he was able to initiate conversation with others. He stated that children with CP often have difficulty with speech, which is delivered mostly in a monotone, but it was great to see how Matthew used different pitches and the volume of his voice to initiate conversation with me in the sessions:

"I find his communication, communication is clear, clearer, more spontaneous..." (MB179-180)

"...more initiation, he will seem more like well should we do this, and it's probably you know...
... because this is what he experienced... like with you." (MB204-207)

Furthermore, Interviewee A mentioned that when Matthew arrived at the Centre in the morning, he would often ask about me and want to have music with me. She thought that was a big thing for Matthew, being able to show his preference**:** she could see the impact of music therapy on him, and it meant a lot to him because he really enjoyed it.

"When Matthew comes in the morning, he often asks [for] you to have music." (MA106-108)

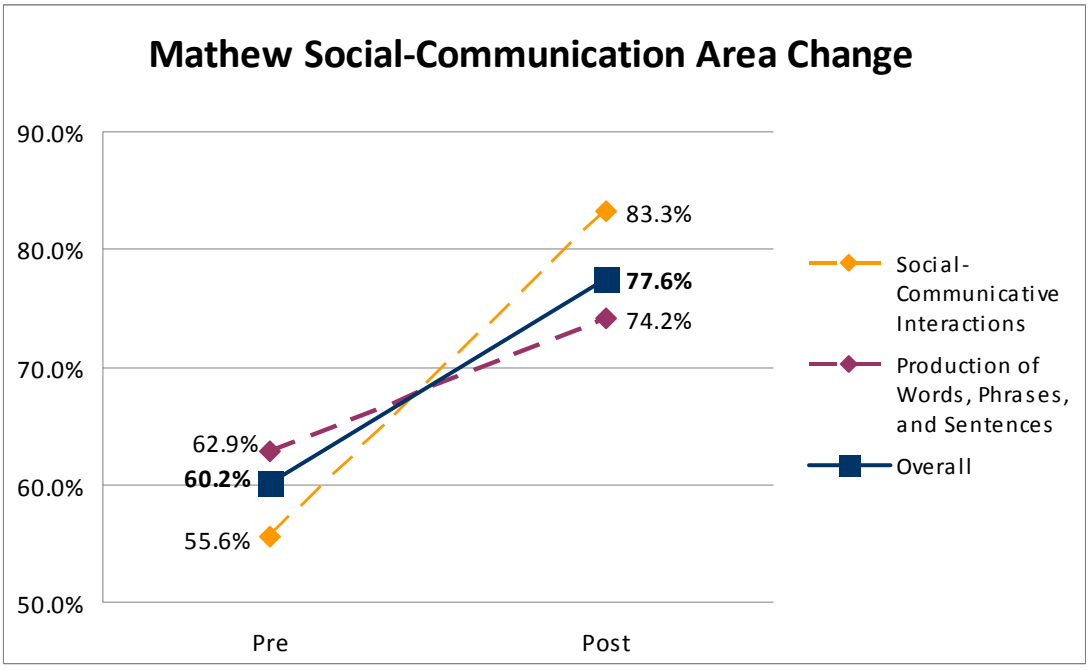
5.3.3 AEPS Assessments

Matthew's AEPS assessment was selected according to his age group. A three to six years AEPS assessment was applied, looking at the social-communication and social areas.

i. Social-Communication Area

This area assesses the social-communicative interactions and production of words, phrases and sentences. Matthewôs progression is noted in graph 3.

Graph 3: Matthew Social-Communication Area Change



It can be seen that Matthew showed improvement in all areas. He demonstrated infinitely better social-communicative interactions, rising from 55.6% to 83.3%, and significantly greater production of words, phrases, and sentences (an increase from 62.9% to 74.2%). Overall his score improved from 60.2% to 77.6%.

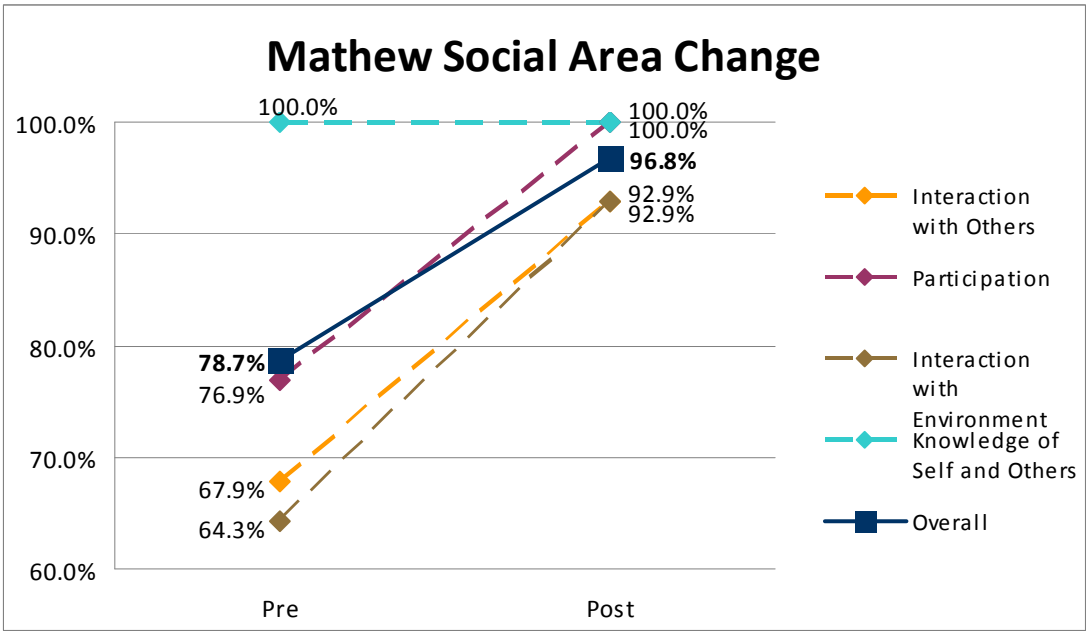
Matthew showed the greatest progress in the social-communicative interactions strand over the three-month period, this rising by 27.7%. According to the data assessment

form, he demonstrated much more consistency in using words, phrases or sentences to express himself. Matthew also showed an 11.3% improvement in the production of words, phrases, and sentences strand, which includes the use of grammar. Matthew showed consistent improvement in the social-communication area by an increase of 17.4% after the three-month period.

ii. Social Area

This draws attention to interaction with others, participation, interaction with environment, and knowledge of self and others. Due to the physical difficulty that Matthew has, the Conductor suggested assessing Matthew under the condition of providing assistance in order to achieve some of the goals stated in the assessment form. However, this decision will not affect the result of the assessment, because the focus is on how the child could achieve the goals within his ability in a natural setting. Matthewôs progression is charted in Graph 4.

Graph 4: Matthew's Social Area Change



According to the graph, Matthew showed improvement in all areas except the knowledge of self and others strand. As he had earlier scored 100% for this strand, it is clear that that was an existing skill and that he was already managing to communicate well. There was no room for improvement, therefore, according to the goals stated in the assessment. Matthew showed impressive progress in the other three strands. He demonstrated better interaction with others after three months by

increasing from 67.9% to 92.9%, more participation in activities by rising from 64.3% to 92.9%, and interaction with his environment rose from 76.9% to 100%. Overall, his social area score increased from 78.7 % to 96.8%.

Matthew demonstrated a consistent overall increase in all sub-areas. There is little difference between each sub-area, as in all of them he scored between 21.3% and 28.6%. However, he showed the greatest increase in interacting with environment, at 28.6%. Referring to the data assessment form, it seems he became more confident in expressing himself and was adapting better at the Centre. Secondly, he showed a 25% increase in interacting with others, which means he is consistently initiating cooperative activity and resolves conflicts by selecting effective strategies in this sub-area. Lastly he achieved a full score for participation, with 21.3% maximum improvement. Changes in the data suggest that, Matthew grew in confidence and became more independent in initiating and completing age-appropriate activities and in watching, listening, and participating during small and large group activities. Overall, he showed an 18.1% increase in the social area.

5.3.4 Summary and Triangulation of Analysis of Data Sources

The key ideas that emerged were categorised in three main areas:

- Communicative Interaction
- Social Interaction
- Participation

i. Communicative Interaction

As children with CP may experience delayed language development, they may refuse to interact with their world and have less opportunities in the world because they lack the confidence to engage fully with their environment (Pennington, 2008). With the support of adequate musical techniques such as role-play, Matthew became more open and willing to share his ideas in the music sessions. Role-playing cartoon characters was what he especially enjoyed, as this could enhance his interest in participating and was something he was familiar with and knowledgeable about: he was comfortable, therefore, interacting with me when the music was supported. His confidence was thus increased as a result of the process.

From the findings, it appears that playful and child-centred approaches are the key aspects of work with Matthew. According to Gold, et al., (2004), music therapy covers a wide range of interventions, and it can be helpful when different music therapy approaches are combined according to development of reciprocal, interactive communication and play. Through the growth in childrenôs playfulness and confidence, music provides extra connections to support communication work (Hoskyns, 2009). Thus, establishing different óplayô types of musical interventions (the Spider game, role-play and the waking up game) in Matthewôs sessions enabled him to connect with and relate better to me: it encouraged him to ask questions and explain and initiate reciprocal communication by using different pitches and increasing or decreasing the volume of his voice. According to Interviewee A, Matthew was not only showing spontaneous responses during the individual music therapy sessions; he was also transferring his skills from the individual sessions to the group session. This suggests that when different music therapy approaches are combined according to Matthewôs needs during the individual music therapy sessions, his confidence can be further developed and his communication and interaction in the natural environment improved.

Matthewôs communication increased markedly during the research period. He demonstrated a command of longer, more complicated sentences, and responded much more quickly and spontaneously later in the research period. The AEPS assessment indicated that he was making continuous use of appropriate words and sentences, and initiating conversation and contact with others. The clinical notes and interviews indicate that the process of music therapy was contributing to Matthewôs communication, although as in any qualitative research, we cannot prove any definitive link between the music therapy and communication. However the detail and nature of the changes have been most interesting to map and record from the interviewees and from the clinical notes.

ii. Social Interaction

According to the AEPS assessment, Matthew showed an overall steady improvement in interacting with others, his environment, and in participating in group activities. Pennington suggests that children would be at risk of becoming passive communicators when parents lead the conversation, as they rarely make requests of

their own and would as a result be socially isolated (Pennington, 2008). To help Matthew finding the courage to ‘speak up’ in front of people, an approach needed to be taken within his comfort zone of giving him the power to lead the music, and not intruding while he was doing so. During the music sessions, I allowed him to lead as much as possible without any overstepping of boundaries, and I gave him significant control with the activities, while of course assisting him musically. In addition, Matthew was able to demonstrate a capacity for turn-taking. By giving him the role of leader, his participation became more vigorous because he was competent in undertaking the musical tasks. Furthermore, his ability to communicate had increased to the extent that he would suggest what to do, as we were ‘in the same boat’ (i.e. we both had the same tasks or goals to achieve). He then naturally became more independent and confident and was able to initiate contact unreservedly.

The therapist and client relationship was well established. Matthew was not only constantly interacting with me, he would also look into my eyes, stroke my hair and look affectionate each time I said it was time to finish the sessions later in the research period. Although he might not have such a close or affectionate relationship with other people, he was not acting too differently outside the music room,

iii. Participation

At the beginning of the research period, Matthew needed to be prompted to participate. Because of his physical difficulties and lack of motivation, he was slow in his responses. However, when he was motivated his participation became more frequent and spontaneous. As is true of all of us, and particularly of a young child, it is normal to want to be involved in entertaining activities; so for Matthew to be motivated to take part, the musical activities had to be fun. With the objective of making them so, my approach was enthusiastic, and I was constantly using my imagination to keep him engaged in the music. As one of his favourite cartoon characters was Bob the Builder, it was useful to adapt tasks performed by Bob to keep him actively participating. The use of props and toys when working with Matthew was essential, because they were part of our music programme and definitely enhanced the interaction: as the interviewee said, *“using the hammer to blend with the music.”*

Matthew was clearly enjoying the musical interventions: he often asked to have them again, and he was obviously having fun. Although the interventions were usually repeated several times in a session, with minimal guidance, Matthew became imaginative when he used instruments as substitutes for the tools/objects that he needed during the role-play to keep it flowing along. Overall, it can be seen from the findings from all sources that Matthew was fully engaged in participating and interacting with people, objects, events and any other situation presenting itself.

CHAPTER 6: DISCUSSION

This chapter will discuss firstly the findings relevant to the research question and the literature review, and secondly, the limitations of this study. It will also offer suggestions for further research.

6.1 Communication and Socialisation in Music Therapy for Children with CP

After reviewing the findings from these three different data sources for two case studies, it is clear that both children demonstrated diverse participation and engagement during the music therapy sessions. When Zaizai was stimulated and motivated, he became more aware and was able to interact non-verbally with me in a consistent manner over time. Whereas, when Mathew was constantly acknowledged and especially when I appeared to be in the same ôboatô with him during the musical interventions, his communication abilities increased. This seemed to help him to build up his confidence in communicating and interacting with me and other people.

It is significant that matching, mirroring or reflecting the musical material could facilitate both the building and the reinforcement of relationships (Wigram, 1999). Relating her experiences in early intervention, Archer (2004) claimed that she responded to the childôs initiatives, worked with the childôs responses, paced the engagements and made use of silence while working with young children, all of which were found by the researcher (I, the MTS) to be relatively significant in terms of experiences in this study .

According to Bean (1995), the fun of musical activity can motivate a child to rise to new challenges; and Interviewee B simply described Matthew in the sessions as having *ñfun fun fun!ò*

6.2 Limitations

There were some issues affecting the findings which have limited the value of the study. These were:

i. Pre-existing relationship factors:

I had been allocated to work at EICEC for the entire year of my clinical placement. Having worked with both children since the beginning of the year, I had already established a relationship with them before the study commenced: and technically I was aware of approaches to take when working with each child, especially Zaizai. Neither, therefore, was uncooperative to the extent of refusing, or wanting to refuse, to work with me.

ii. Time factor:

Due to the programme of this music therapy course and research application process, I was unable to begin the research right at the beginning when I first commenced working at the Centre. Because I already had been working with the children for five months before the actual research began, they may have already gained some musical experience and competence to participate in the music therapy sessions. It would be beneficial in future studies to begin investigation when the practice is begun, as valuable information emerges at the beginning of such a process. For ethical reasons ï but an unavoidable drawback for this study ï I was not in a position to look back at previous practices when some information was missing.

iii. Finding appropriate tools:

Although there are lots of assessment tool available for children with special needs, it is somehow difficult to find the most appropriate assessment tool for this study. This is because most of the assessments subcategorised into very specific categories which may not be so relevant and necessary for my study. Even the assessment tool that I used in this study, it divided into two different age-group assessments, but because of the severe condition of Zaizai, I have to use the one which close to his ability instead of simply following his age-group. Not only that, the AEPS assessment seems to be more appropriate for children with less disable because to be able to achieve the goals in the assessment, the children need to have some strength in expressing themselves such as express themselves verbally and physical able. Therefore for children like Zaizai, the AEPS assessment seems less helpful because he was not in the

right age-group assessment and according to his abilities, he would be have difficulty in achieving the goals in the assessments.

iv. Conflict of having group music therapy sessions:

Part of the music therapy programme at EICEC involved having regular group music therapy sessions. However, the study was only focusing on the individual music therapy works with the children therefore it would not have been ethical to stop a successful part of the childrenôs school programme. It is, on the other hand, hard to say with certainty just what has brought about particular changes in a child. The AEPS assessment was measuring any sort of change, and there were many types of educational input that the children were receiving in addition to music therapy. We cannot then conclude irrefutably that individual music therapy caused any specific changes in the child.

v. Limited number of children:

As not all the children who attend EICEC are diagnosed with CP, those fulfilling the criteria for this research study were few in number. It was not possible to select two children with similar disabilities this time, but this could be a valuable objective in future research.

Despite these limitations, this study provided an in-depth view of each child that has served to illuminate music therapy work with children who have CP. The data was collected from several sources and the essential meaning of these carefully considered; and this provided various perspectives on the phenomenon. Member checking and peer debriefing were employed during the process of analysis (as indicated in the Methodology section 4.6) and this assisted in providing a critique and support to the interpretation of the data and hopefully in adding transparency and veracity to the results.

6.3 Further Research

It was evident from the pre-existing music therapy literature that little research had been done on enhancement of communication with children who have CP. The two key studies from Van Colle (2003) and Gilboa & Ronginsky (2010) focused specifically on the model of supporting mother-infant relationship; but it is important

to broaden the question so that other scenarios are explored as not all parents are available to take part in a research project; especially in a longer treatment process.

As this is an exploratory case study, the number of children involved was small. The project does not present a holistic view of employing music therapy for all children who have CP with communication and socialisation difficulties, but it can serve as a fundamental guideline in future research study. Two children were studied in detail over a three month period, and the results show indications about the value of music therapy to a severely disabled child, and to one with more language and mobility. A nationwide project recruiting children with a more specific diagnosis of CP as well as drawing upon a greater number of children of both sexes within a given age range, and entailing a longer period of research, may allow a better overview of how music therapy can enhance communication and socialisation. It would be useful to build on Gilboaôs work with non-verbal children, and establish areas of focus indicated by aspects of this projectôs findings, so as to form a more technical in-depth quantitative research study. This would provide more convincing evidence for the reader, as well as for researchers, therapists and others operating in a professional capacity.

CHAPTER 7: CONCLUSION

This qualitative research project investigated how music therapy can promote communication and socialisation for children with CP. The investigation demonstrated that through regular individual music therapy sessions, both the children involved developed different ways of initiating communication and socialisation according to their abilities and physical capacity.

The main findings of this study reveal that it is possible, in the perceptions of staff participants and measurement on the AEPS scale to demonstrate how communication and socialisation can be enhanced through music therapy based on a child-centred approach. As the extent of physical disability was different in each case, my strategies were flexible in approaching the children, and I bore their needs and abilities in mind at all times so as to provide maximum help for them through the use of music. A child with quadriplegia has much less chance for physical involvement in music, so even a limited amount of physical activity and vocal contribution can constitute an important message for the therapist. A child with hemiplegia, on the other hand, can be more independent when participating in musical activities, and able to initiate more conversational interaction. For both Zaizai and Matthew, the focus on communicative interaction was the key aspect in all data sources: this contributed to an overview that music therapy could help engender interaction with others, facilitate óconversationsô and increase the output of verbal and non-verbal exchange.

In summary, despite the limitations outlined, the value, perceived by participants of receiving regular individual music therapy has been precisely documented in this study. Music therapy can serve to promote communication and socialisation for children with CP when appropriate approaches and techniques are applied for clients.

REFERENCES

Aigen, K. (2005). Naturalistic Inquiry. In B. L. Wheeler (Ed.), *Music Therapy Research* (2nd ed., pp. 352-364). United States: Barcelona Publishers (NH).

Archer, C. (2004). Music Therapy and Early Intervention: The Parent-Child Relationship is Centre Stage. [Clinical based study]. *New Zealand Journal of Music Therapy, 2*, 36-49.

Ball, C. M. (2004). Music Therapy for Children with Autistic Spectrum Disorder. *Bazian Ltd and Wessex Institute for Health Research & Development, 4*(1).

Beach, R. C. (1988). Conductive Education for Motor Disorders: New Hope or False Hope? *Archives of Disease in Childhood, 63*, 211-213. Retrieved from http://adc.bmj.com

Bean, J. (1995). Music Therapy and the Child with Cerebral Palsy: Directive and Non-Directive Intervention. In T. Wigram, B. Saperston & R. West (Eds.), *The Art and Science of Music Therapy: A Handbook* (pp. 194-208). Switzerland: Harwood Academic Publishers.

Blair, E., & Watson, L. (2006). Epidemiology of Cerebral Palsy. *Seminars in Fetal & Neonatal Medicine, 11*, 117-125.

Braun, V., & Clarke, V. (2006). Using Thematic Analysis in Psychology. *Qualitative Research in Psychology, 3*, 77-101.

Bunt, L. (1994a). Music Therapy and Child Health. *Music Therapy: An Art Beyond Words* (pp. 94). London and New York: Routledge.

Bunt, L. (1994b). *Music Therapy: An Art Beyond Words*. London and New York: Routledge.

Bunt, L., & Hoskyns, S. (Eds.). (2002). *The Handbook of Music Therapy*. London, New York: Routledge.

Colle, S. J. V. (2003). *Music Therapy Process with Young People who have Severe Multiple Disabilities.* University of Reading, Berkshire.

Coulson, J. (2004). Am I my voice? Communication, Speech, and Music Therapy. *New Zealand Journal of Music Therapy, 2*, 99-122.

Dileo, C. (2005). Reviewing the Literature. In B. Wheeler (Ed.), *Music Therapy Research* (pp. 105-111). Gilsum: Barcelona Publishers.

Evans, Y. (2008). Counsellors and Research: Exploring the Benefits of Researching other Counsellors' Experiences. *New Zealand Journal of Counselling, 28*(1), 56-71.

Gayle, P., & Jann, K. (1995). *Integrating Augmentative and Alternative Communication into Group Programs: Utilising the Principles of Conductive Education*. Victoria: OCA Press.

Geralis, E. (Ed.). (1991). *Children with Cerebral Palsy*. United States: Woodbine House.

Gilboa, A., & Roginsky, E. (2010). Examining the Dyadic Music Therapy Treatment (DUET): The Case of a CP Child and His Mother. *Nordic Journal of Music Therapy, 19*(2), 103-132.

Gold, C., Voracek, M., & Wigram, T. (2004). Effects of Music Therapy for Children and Adolescents with Psychopathology: A Meta-Analysis. *Journal of Child Psychology and Psychiatry, 45*(6), 1054-1063.

Gold, C., Wigram, T., & Elefant, C. (2006). Music Therapy for Autistic Spectrum Disorder. *Cochrane Database of Systematic Reviews, 19*(2). Retrieved from http://mrw.interscience.wiley.com/cochrane/clsysrev/articles/CD004381/abstract.html

Hoskyns, S. (2008). Conversations About Research and Practice in Music Therapy. *Voices: a World Forum for Music therapy.* Retrieved from http://www.voices.no/columnist/colhoskyns171108.php

Hoskyns, S. (2009). *Promoting Readiness for Learning in A Pre-School Child with Features of Developmental Dyspraxia: Some Strategies from Music Therapy*. Paper presented at the Paper in Proceedings of Music 09 Music Education Conference.

Hume, K., Bellini, S., & Pratt, C. (2005). The Usage and Perceived Outcomes of Early Intervention and Early Childhood Programs for Young Children with Austism Spectrum Disorder. *Topics in Early Childhood Special Education 25*, 195-207.

Jones, K. (2007). *The Potential Role for Music Therapy in a Deaf Education Centre in New Zealand.* New Zealand School of Music, Wellington.

Jonsdottir, V. (2002). Musicking in Early Intervention. *Voices: A World Forum for Music Therapy*. Retrieved from http://www.voices.no/mainissues/Voices2(2)jonsdottir.html

Krakouer, L., Houghton, S., Douglas, G., & West, J. (2001). The Efficacy of Music Therapy in Effecting Behaviour Change in Persons with Cerebral Palsy. *International Journal of Psychosocial Rehabilitation, 6*, 29-37. Retrieved from http://psychosocial.com/current_2002/leith.html

Krigger, K. W. (2006). Cerebral Palsy: An Overview. *American Family Physician, 73*(1), 91-100.

Kwak, E. E. (2007). Effect of Rhythmic Auditory Stimulation on Gait Performance in Children with Spastic Cerebral Palsy. *Journal of Music Therapy, 44*(3), 198-216.

Malloch, S., & Trevarthen, C. (2008a). Musicality: Communicating the vitality and Interests of Life. *Communicative Musicality: Exploring the Basis of Human Companionship* (pp. 1-12). United States: Oxford University Press.

Malloch, S., & Trevarthen, C. (2008b). Part 3 Musicality and Healing. In S. Malloch & C. Trevarthen (Eds.), *Communicative Musicality: Exploring the Basis of Human Companionship* (pp. 357-376). United States: Oxford University Press.

Marley, S. L. (1984). The Use of Music with Hospitalized Infants and Toddlers: A Descriptive Study. *Journal of Music Therapy, 21*(3), 6-132.

McLeod, J. (2010). *Case Study Research in Counselling and Psychotherapy*. London & Thousand Oaks: Sage Publications.

Nordoff, P. (1995). It's Your Turn to Sing. In C. Robbins & C. Robbins (Eds.), *Greetings and Goodbyes: A Nordoff-Robbins Collection for Classroom Use* (pp. 5). USA: Theodore Presser Company.

Oldfield, A. (1995). Communicating Through Music: The Balance Between Following and Initiating. In T. Wigram, B. Saperston & R. West (Eds.), *The Art and Science of Music Therapy: A Handbook* (pp. 226-238). Switzerland: Harwood Academic Publishers.

Oldfield, A., & Bunce, L. (2001). 'Mummy can play too...' Short-Term Music Therapy with Mothers and Young Children. *British Journal of Music Therapy 15*(1), 27-36.

Peng, Y.-C., Lu, T.-W., Wang, T.-H., Chen, Y.-L., Liao, H.-F., Lin, K.-H., et al. (2011). Immediate Effects of Therapeutic Music on Loaded sit-to-stand Movement in Children with Spastic Diplegia. *Gait and Posture, 33*, 274-278.

Pennington, L. (2008). Cerebral Palsy and Communication. *Peadiatrics and Child Health, 18*(9), 405-409.

Perry, R. (2003). Relating Improvisational Music Therapy with Severely and Multiply Disabled Children to Communication Development. *Journal of Music Therapy, Fall 40*(3), 227-246.

Richards, L. (2009). Part II: Working with the Data: Chapter 5 Coding. *Handling Qualitative Data: A Practical Guide* (2nd ed., pp. 93-114). London: Sage Publications.

Rickson, D. J. (2008). The Potential Role of Music in Special Education (The PROMISE) ï New Zealand Music Therapistsô Consider Collaborative Consultation. [Periodical]. *New Zealand Journal of Music Therapy, 6*, 75-97.

Roth, E. A., & Wisser, S. (2004). Music Therapy: The Rhythm of Recovery. *The Case Manager, 15*(3), 52-56.

Schwarts, E. (2008). Part I: Music, Young Children, and Development. *Music Therapy and Early Childhood*. Gilsum, NH: Barcelona Publishers

Shoemark, H. (2008). Infant-Directed Singing as a Vehicle for Regulation Rehearsal in The Medically Fragile Full-Term Infant. *Voices: A world forum for music therapy.* Retrieved from http://www.voices.no/mainissues/mi40008000282.php

Stamenovic, M. (2009). *Engaging in Music Therapy: A Detailed Study of Communication Between the Therapist and Client Presenting with Severe and Multiple Handicaps.* New Zealand School of Music, Wellington.

Streeter, E. (2006). What are We Doing to Ourselves: The Branding of Music Therapy in Academia. In S. Hadley (Ed.), *Feminist Perspectives in Music Therapy* (pp. 355-366). Gilsum, NH.: Barcelona.

Tatlow, A. (2005a). Part II: Towards a Theoritical Foundation in Conductive Education: The Child's Integrative and Active Learning. *Conductive Education for Children and Adolescents with Cerebral Palsy* (pp. 83-90). Hong Kong: Ashfield Press Publishing.

Tatlow, A. (2005b). Part III: The Unifying Educational-Therapeutic Methodology in Conductive Education *Conductive Education for Children and Adolescents with Cerebral Palsy* (pp. 183-188). Hong Kong: Ashfield Press Publishing

Trass, J. (2010). Perception of Client's Speech and Language Abilities. In H. C. Kho (Ed.). Wellington.

Twyford, K. (2008). Collaborative and Transdisciplinary Approaches with Children. In K. Twyford & T. Watson (Eds.), *Integrated Team Working: Music Therapy as Part of Transdisciplinary and Collaborative Approaches* (pp. 49-62). London: Jessica Kingsley Publishers.

Walworth, D. D. (2009). Effects of Developmental Music Groups for Parents and Premature or Typical Infants Under Two Years on Parental Responsiveness and Infant Social Development. *Journal of Music Therapy, 46*(1), 35-52.

Warren, P. (1997). Music Therapy with a Child with Cerebral Palsy: A Case Study. *Annual Journal of the New Zealand Society for Music Therapy, 31*, 29-43.

Wheeler, B. L., Shultis, C. L., & Polen, D. W. (2005). *Clinical Training Guide for the Student Music Therapist*. Gilsum: Barcelona Publishers.

Wigram, T. (1999). Contact in Music: The Analysis of Musical Behaviour in Children with Communication Disorder and Pervasive Developmental Disability for Differential Diagnosis. In T. Wigram & J. D. Backer (Eds.), *Clinical Applications of Music Therapy in Developmental Disability, Paediatrics and Neurology* (pp. 69-92). United Kingdom: Jessica Kingsley Publishers.

Wigram, T. (2004). *Methods and Techniques for Music Therapy Clinicians, Educators, and Students*. London: Jessica Kingsley.

Wigram, T., & Gold, C. (2005). Music Therapy in The Assessment and Treatment of Autistic Spectrum Disorder: Clinical Application and Research Evidence. *Child: care, health and development, 32*(5), 535-542.

Wigram, T., Pedersen, I. N., & Bonde, L. O. (2002). *A Comprehensive Guide to Music Therapy: Theory, Clinical Practice, Research and Training*. United Kingdom: Jessica Kingsley Publishers.

Wu, L. X., Yu, H. B., & Liu, Y. F. (2008). Combines Treatment Using Acupuncture and Music Therapy on Children with Cerebral Palsy - Gross Motor Function Measure Comparison in 60 Cases. *Neural Regeneration Research, 3*(6), 694-696.

Yin, R. K. (2009). *Case Study Research: Design and Methods* (4th ed.). Thousand Oaks: Sage Publications.

Zeldin, A. S. (October 28, 2010). Cerebral Palsy: Multimedia. Retrieved 3 January, 2011, from http://emedicine.medscape.com/article/1179555-media

APPENDICES

APPENDIX 1: Consent Form – Parent/ Guardian

MUSIC THERAPY PROGRAMME (MMusTher)

Promoting Communication and Socialisation through Music Therapy for Children with Cerebral Palsy

CONSENT FORM – PARENT/GUARDIAN

1. I have read and I understand the information sheet dated _____ about a research project to identify how music therapy could promote communication and socialisation in children with cerebral palsy. I understand that the researcher would like to write a case study about her work with my child, I have had the opportunity to discuss this study. I am satisfied with the answers I have been given

2. I understand that it is my choice for my child to be part of this study and that we can withdraw from the study at anytime up until the analysis of the data, and that this will not affect my childôs eligibility to receive music therapy outside of the project.

3. I understand that my child participation in this study is confidential and that no material which could identify him/her or our family will be used in any reports on this study.

4. I understand that the treatment will be stopped if it should appear to be harmful to my child.

5. I have had time to consider whether we will take part in this study.

6. I understand the compensation provisions for this study.

7. I know whom to contact if anything occurs which I think he/she would consider a reason to withdraw from the study.

8. I know whom to contact if I have any questions regarding to the study.

9. I understand that the study will be presented by the researcher as a thesis towards the qualification of Master of Music Therapy, New Zealand School of Music.

10. I give consent for the music therapy sessions of my child to be video-recorded: YES / NO

11. I wish to receive a copy of the results: YES / NO

I _____ (full name of parent/guardian),

hereby give consent for _____ (full name of child) to take part in this study.

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

Full Name - printed .....

APPENDIX 2: Consent Form – Staff Member

MUSIC THERAPY PROGRAMME (MMusTher)

Promoting Communication and Socialisation through Music Therapy for Children with Cerebral Palsy

CONSENT FORM – STAFF MEMBER

1. I have read the Information Sheet dated _____ inviting staff member volunteers to take part in the project to identify how music therapy could promote communication and socialisation in children with cerebral palsy I have had the opportunity to discuss this study. I am satisfied with the answers I have been given.

2. I understand that it is my choice to be part of this study and that I can withdraw from the study at anytime up until the analysis of the data.

3. I understand that any information relating to my participation in this study is confidential and that no material that could identify me will be used in any reports on this study.

4. I understand the compensation provisions for this study.

5. I have had time to consider whether to take part in this study.

6. I know whom to contact if I have any questions or concerns regarding this study.

7. I understand that the study will be presented by the researcher as a thesis towards the qualification of Master of Music Therapy, New Zealand School of Music.

8. I consent to my interview being audio-taped: YES / NO

9. I understand that I will be sent a copy of the interview transcript and will be able to amend or edit the content to my satisfaction.

10. I understand that I can request to have the interview recording returned to me after the interview has been transcribed. YES / NO

11. I wish to receive a copy of the results: YES / NO

I _____ (full name of staff member), hereby consent to participate in this research project.

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

Full Name (printed) .....

APPENDIX 3: Assent Form - Children

MUSIC THERAPY PROGRAMME (MMusTher)

Promoting Communication and Socialisation through Music Therapy for Children with Cerebral Palsy

ASSENT FORM – CHILDREN

I understand what has been explained to me about having music with Coco and being in her story. I know Coco will write a story about the music sessions that other people might read. I have had the chance to ask questions, and am happy with the answers.

I know that I donôt have to have music with Coco and that I can say no at any time.

I know that my real names will not be used in the story.

I have had enough time to think about whether to take part in the music sessions.

I know I can talk to Coco or teacher about my feelings about the music session(s), and that I can ask Coco or teacher any questions about the music sessions.

I _____ want to have music with Researcher and be in her story.

Child signature: é é é é é é é é é é é é é é é é é é

Date: é é é é é é é é é é é é é é ..

Project explained by: é .

APPENDIX 4: Information Sheet for Parents/ Guardian

MUSIC THERAPY PROGRAMME (MMusTher)

Promoting Communication and Socialisation through Music Therapy for Children with Cerebral Palsy

INFORMATION SHEET FOR PARENTS/ GUARDIAN

Researcher:
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Dear parent or guardian,

I am Hong Ching Kho (Coco), a second year master of music therapy student, providing music therapy services at Conductive Education in XXXXX. As part of my studies, I am involved in developing a research project about music therapy and cerebral palsy. Your child is being invited to take an indirect part in this project that will explore how music therapy can promote communication and socialisation for children with cerebral palsy. The purpose of the research is to find out whether music therapy can motivate the children with cerebral palsy at a Conductive Education Centre to be more interested in communication and to have more interaction with the others verbal and non-verbally. This project is being undertaken as part of a Master in Music Therapy under the supervision of Sarah Hoskyns, Director of Music Therapy at the New Zealand School of Music in Wellington.

From the referrals for music therapy at the centre, there are 6 potential children who are eligible for the study. However I will only need two children for the study to allow me to write an in-depth case study about the music therapy sessions of each child. If you decide that you would like your child to participate, I will arrange to have two individual music therapy sessions each week for a period of 3 months. The music therapy session will last between 20-30 minutes depending on the age and needs of your child. The music therapy session will involve playing instruments, singing, listening, turn-taking and sharing in music. Music therapy is part of the care provided at the Conductive Education Centre and will be provided at no cost.

All the sessions will be video-recorded for me to reflect on my work. Two video clips at different time points will be chosen to present to two volunteer staff participants to gain their perceptions on the work. Two standard assessments will be done for each child by Centre Staff before the music therapy session begins and after the music therapy session end to provide a baseline regarding communication and interaction with others. This will not cause any extra time or discomfort to your child because the assessments will be done individually as part of regular observation of the children at the centre. You may request a copy of the video-recording of your child on special arrangement after the study. The researcher is not responsible for the cost of the recording. Therefore an additional cost may apply if you request this.

Your child's rights
No material, which could personally identify your child or family, will be used in any reports on this study (i.e. all names and identifying details will be changed). Neither the name of the Centre nor itsô location will be used in the thesis. However as Conductive Education is specialised and fairly rare in NZ, there us a slight risk that your child could be identified through association with this specialised service, though I will make every attempt to minimise this risk. The records will be stored in a secure room at the New Zealand School of Music for ten years from when your child turns sixteen years. Only the researcher and her supervisor will have access to the data. Your childôs name will not be used in the thesis to ensure privacy and confidentiality. A copy of the thesis will be in the libraries of Massey University and Victoria University of Wellington.

It is anticipated that your child will benefit from receiving music therapy. Studies have provided evidence that music therapy is an effective treatment especially in facilitating communications as music is a medium that involves a complex range of expressive qualities, dynamic form and dialogue, and establishes alternative communication that can help to achieve engagement, interaction and building relationships (Wigram & Gold, 2005).Music therapy is a non-threatening intervention that your child will benefit from. This research intends to explore the area of communication and socialisation more fully, as it is an important feature of the primary mission of conductive education and this could be an important contribution for music therapy in this field.

Your childôs participation is entirely voluntary (your choice). Your child does not have to be involved in this study, and if you choose not to give consent he/she will receive the standard treatment. If you do agree to let your child be involved, your child is free to withdraw from the study at any time, up until the analysis of the data, without having to give a reason. You will have up to two weeks to decide. Your child has the right to consent to participate in research when they are capable of understanding what the study involves and the risks. If your child is unable to fully understand, I will still seek to gain their assent, unless your child is unable to communicate.

The results of the research are available upon request. Please note that the results may not be ready for publication until midway through 2011. 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 you after the study.

This study has received ethical approval, following expedited review, from the Central Regional Ethics Committee, (reference number: ***CEN/10/EXP/039***). If you have any queries or concerns regarding your childôs rights as an indirect participant in this study, you may wish to contact an independent health and disability advocate:

Free phone: 0800 555 050
Free fax: 0800 2 SUPPORT (0800 2787 7678)
Email: advocacy@hdc.org.nz

Please feel free to contact the researcher or supervisor if you have any questions about this study at the above phone numbers.

Hong Ching Kho (Researcher)
Researcher

APPENDIX 5: Information Sheet for Children

MUSIC THERAPY PROGRAMME (MMusTher)

INFORMATION SHEET FOR CHILDREN

Coco is going to offer music sessions to some children in our school. She will write a story about the children and their music and give it to her university teacher to mark. The story will 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 how children play the music and the fun of music with Coco.

You are being invited to be one of the children in the story. You will have music with Coco. You will have two music sessions with Coco each week individually for 3 months. We will be playing instruments and singing songs in the sessions. Coco will write about what happened during music, which will be in the story.

You donôt have to be in the story if you donôt want to be. If you would like to have music but not be in the story then thatôs ok too. You can talk to your mum, dad or XXXX at any time.

Coco thinks that you will enjoy music and that it will help you to have more fun at the school.

The story Coco will writes is for therapists, caregivers and teachers. However, your mum, dad or caregiver can have a copy of the story too if they would like to.

You can take some time to think about being in the story or not. You can talk to Coco, or XXXX, and ask questions about the music story before you sign this paper. If you would like to have music and be in the story, please sign the óassentô page.

Read and explained to: _____ (name of child)

By: _____ (name of staff member)

Signature: _____ Date: _____

APPENDIX 6: Information Sheet for Staff Members

MUSIC THERAPY PROGRAMME (MMusTher)

Promoting Communication and Socialisation through Music Therapy for Children with Cerebral Palsy

INFORMATION SHEET FOR STAFF MEMBERS

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You are invited to take part in a project that will explore how music therapy can promote communication and socialisation for children with cerebral palsy. The purpose of the research is to find out whether music therapy can motivate the children with cerebral palsy at a Conductive Education Centre to be more interested in communication and to have more interaction with the others verbal and non-verbally. This project is being undertaken as part of a Master in Music Therapy under the supervision of Sarah Hoskyns, Director of Music Therapy at the New Zealand School of Music in Wellington.

How will the researcher select people to take part?
As part of this research project I would like to invite two staff members to undertake a short informal interview about their views on two video clips of two children involved in regular music therapy at the Centre. The interviews will be carried out at Conductive Education Wellington Trust during our normal work hours. No additional time will be involved. Staff currently working with children at the Centre will be eligible to participate, and i will invite the first two respondents who reply to this invitation.

What will be involved in taking part?
If you agree to take part in this study you will be invited to watch two short extracts of video at different time points in each childôs music therapy sessions and then have an informal interview with the researcher to give your perceptions about each childôs

communication and social interaction in the videos. These tasks will take approximately forty minutes for each childôs case and I propose to undertake two forty- minute session on different days, to fit in with your and the Centreôs timetable. Therefore we will arrange to meet twice for forty minutes, a total of 1 hour and twenty minutes in all. The interview will be audio recorded and the researcher will make a written transcript of the interview. This will be returned to you to check for accuracy, and to allow you to edit or add anything. You may request to have the recording after it has been transcribed.

Rights of participants
No material which could personally identify you, will be used in any reports on this study, all names will be changed. Neither the name of the Centre nor its location will be used in the thesis. However as Conductive Education is specialised and fairly rare in NZ, there is a slight risk that you could be identified through association with this specialised service. The records will be stored in a secure room at the New Zealand School of Music for a period of ten years. Only the researcher and her supervisor will have access to the data. Your name will not be used in the thesis to ensure privacy and confidentiality. A copy of the thesis will be stored in the libraries at Massey University and Victoria University of Wellington.

Your participation is entirely voluntary and even if you do agree to take part in the study, you are free to withdraw from the study at any time, up to the period of analysis of the data, without having to give a reason. You will have up to two weeks to decide.

The results of the research will be made available upon request. Please note that the results may not be ready for publication until midway through 2011. 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 you after the study.

This study has received ethical approval following expedited review from the Central Regional Ethics Committee, (reference number: ***CEN/10/EXP/039***). If you have any queries or concerns regarding your rights as a participant in this study, you may wish to contact an independent health and disability advocate:

Free phone: 0800 555 050
Free fax: 0800 2 SUPPORT (0800 2787 7678)
Email: advocacy@hdc.org.nz

Please feel free to contact the researcher or her supervisor if you have any questions about this study at the above phone number.

Hong Ching Kho (Researcher)
Researcher

APPENDIX 7: An Example of a Clinical Notes and Reflections

2/8/2010 Monday
Zaizai
1:25-1:45 (20mins)

Aims / Goals : Encouraging vocalisation
Non-verbal musical interaction
Enjoyment and engagement

Activities : Planned / Unplanned

1. Hello Song
2. Sing-a-long
i. Children love to sing (with chime)
ii. Lu La La (with wood block)
3. Sound exploratory
4. Turn-taking vocalisation
5. Goodbye Song

P.S.	MTS
O	ã
ãx	ã
ãx	ã
ãã	ã
ã	ã
ãã	ã
ã	ã

General Comments:

Zaizai smiled at me when I said I am going to take him to music. Zaizai was placed in his standing frame. He didnôt react to the English hello song at the beginning, maybe he couldnôt understand it. He had his head looking down. I kept repeating my hello song, where until the third times, I finally get him to lift his head up and smiled. He kept looking at the chimes that placed on his left and looking eager to play on the chime. Then I took it over and placed it in front of him. He laughed when I strummed on the chimes. I directed him where the chime was and he managed to reach to the chime himself. He continued to lift his head up and laughed during the intervention. Then I started to sing a Chinese children song ñHappy children like to singò. He started to make noises ñerhé ò and kept lifting up his head, and turning here and there. When I tried to slow down the rhythm, Zaizai would make a noise to respond to my singing and I started to speed up again. Occasionally I paused and checked on his responses, he would make a noise ñngé ò and then Iôd start singing again. But when I stopped singing or talking to him, he dropped his head. There were a few times that Zaizai was singing together with me. He appeared to be happy because he kept smiling and laughing. I tried to imitate the way he made the sound ñNgé ò, he responded me and we had the play for a few times then he played on the chime again. I started to sing ñreach out your hands and play the chimeò in English, but I am not too sure about his understanding of the language. He did play on the chimes a few times with my guide but I donôt think he really knows what I am looking for. Therefore I changed another approach by exploring different sound of instruments with him.

Instead of a bright and sharp timbre of instrument like wind chimes, I offer him a wood black which showed a contrast. When I was singing and playing with the woodblock, Zaizai didn't seem to respond much. After a while, he started to smile and laugh and gradually singing with me too (sliding his voice between C to E). I offered him a shaker to play with and we ended up singing and playing together. I stopped singing the song after twice because Zaizai tended to sing and I would like to let him lead as well as listen to him. He sang for awhile and realised I wasn't singing anymore then that lead us to a non-verbal vocalising communication. I had a vocal play with him by copying the way he produced the sound. He was happy. He laughed and continued to make noises. He responded to me every time after I sang, just like a call and respond interaction. The intervention lasted for at least 2 minutes. When he was getting quieter, I claimed that we should stop. I started to sing my goodbye song, however he didn't tend to have as much respond as before when we have the call and respond intervention. He might be tired by then or he wanted to have a longer music session.

Interaction notation:
Zaizai : ngué .
MTS : ngu ngu~~~~ ngu
MTS : ngu ngu~~~~ ngu
Zaizai : ngué
MTS : ngu ngu~~~~ ngu
Zaizai : nug~~ e~~~
MTS : e e~~~ e
Zaizai : ngué
MTS : ngu ahé ah
Zaizai : ahé
MTS : ahé .
Zaizai : ah~~ ah
MTS : ahé .
MTS : ahé .
Zaizai : eré
MTS : eré é é ah~~~~~~~ ah
Zaizai : ngué é
MTS : ngu ngu~~~~ ngu
Zaizai : ngué .
MTS : ngué .
Zaizai : ngué .
MTS : ngu gnué
Zaizai :nugé .oh
MTS : ohé é é .
Zaizai : ngué
MTS : oh (higher pitch)é é
Zaizai : ngu..oh (matching pitch)
MTS : oh (lower pitch)é é .
MTS : oh (lower pitch)é é .
Zaizai : oh (followed the pitch)é ..
MTS : ahé .
Zaizai : ahé
MTS : ahé . ah (G-E)

MTS : ahé . ah (G-E)
MTS : ahé . ah (G-E)
Zaizai : ahé .. ah (G-G)
MTS : ahé . ah (G-E)
Zaizai : ahé .. ah (G-E) very close to
MTS : ahé . ah (F-D)
Zaizai : huhé .
MTS : huhé .. e e
MTS : ahé . ah (G-E)
Zaizai : ahé .. ah (G-G)
MTS : ahé . ah (G-E)
Zaizai : er~~~ laughed

Reflections:
I could develop a vocal pattern to allow Zaizai to express during certain intervention. What is his understanding? Can he understanding English? Did he manage to differential the differences of his voice? I need anticipate more to allow him to respond to the hello song. Although I know Zaizai will response to certain sounds and interactions, what other skills and techniques I could apply to his sessions so that I could encourage him to vocalise without me prompting.

I am not too sure whether his responses were stimulated by the sound of the instruments or my singing. I think if I want to focus on exploring the sound, then I should focus on the instrument to avoid confusion and multitasking. However, if I am looking for communication and socialisation, I think the intervention is still considered appropriate. I should develop a more structure communication pattern for Zaizai so that he might be able to express himself better or could understand the music intervention better. I may need to give him more space to let him response vocally or to letting him know this is the time he can free himself by making all sort of noises he wants to make.

APPENDIX 8: Staff Members Interview Guidelines

STAFF MEMBERS INTERVIEW GUIDELINES

(Informal interview)

Questions:

Having observed the two video extracts, please comment on which is the earlier and which the later extract? Could you offer any reasons for your choice?

Does the child engage with the music in either or both of the extracts?

Does the child try to communicate verbally or non-verbally in either/both?

Does the child show interaction with the music therapy student (the researcher)?

Does the child show different ways of expressing her/himself at the two different time points videoed?

Do you have any comment on any other changes you have noticed in the child that seem relevant?

APPENDIX 9: An Example of a filled AEPS Assessment

AEPS™ Birth to Three Years

SOCIAL AREA

S = Scoring key	N = Notes
2 = Consistently meets criterion	A = Assistance provided
1 = Inconsistently meets criterion	B = Behavior interfered
0 = Does not meet criterion	D = Direct test
	M = Modification/adaptation
	Q = Quality of performance
	R = Report

Name: Zaizai

	Before				After			
Test period:	Before				After			
Test date:	30 July				10 Nov			
Examiner:	Conductor				Conductor			

	IFSP/IEP	S	N	S	N	S	N	S	N
A. Interaction with Familiar Adults									
1. Responds appropriately to familiar adult's affect (p. 111)		0	D			1	D		
1.1 Displays affection toward familiar adult		1	D			2	D		
1.2 Responds appropriately to familiar adult's affective tone		1	D			2	D		
1.3 Smiles in response to familiar adult		1	D			1	D		
2. Initiates and maintains interaction with familiar adult (p. 111)		1	D			1	D		
2.1 Initiates simple social game with familiar adult		1	D	7/22 = 31.8%		1	D	13/22 = 59.1%	
2.2 Responds to familiar adult's social behavior		0	D			0	D		
2.3 Uses familiar adults for comfort, closeness, or physical contact		1	D			1	D		
3. Initiates and maintains communicative exchange with familiar adult (p. 112)		0	D			1	D		
3.1 Initiates communication with familiar adult		0	D			1	D		
3.2 Responds to communication from familiar adult		1	D			2	D		
B. Interaction with Environment									
1. Meets observable physical needs in socially appropriate ways (p. 114)		0	D			0	D		
1.1 Meets internal physical needs of hunger, thirst, and rest		1	D			1	D		
1.2 Uses appropriate strategies to self-soothe		0	D	2/10 = 20%		0	D	2/10 = 20%	
2. Participates in established social routines (p. 115)		0	D			0	D		
2.1 Responds to established social routines		1	D			1	D		
C. Interaction with Peers									
1. Initiates and maintains interaction with peer (p. 116)		0	D			0	D		

Child Observation Data Recording Form I: Social Area

Name: Zaizai

		Test period:	Before				After			
		Test date:	30 July				10 Nov			
		Examiner:	Conductor				Conductor			
	IFSP/IEP	S	N	S	N	S	N	S	N
1.1 Initiates social behavior toward peer		0	D			0	D		
1.2 Responds appropriately to peer's social behavior		0	D	2/18 =	11.1%	0	D	3/18 =	16.7%
1.3 Plays near one or two peers		0	D			0	D		
1.4 Observes peers		1	D			1	D		
1.5 Entertains self by playing appropriately with toys		1	D			1	D		
2. Initiates and maintains communicative exchange with peer (p. 117)		0	D			0	D		
2.1 Initiates communication with peer		0	D			0	D		
2.2 Responds to communication from peer		0	D			1	D		

An Area Raw Score can be computed by adding all of the 2 and 1 scores entered in the S column for a specific test period. To compute the Area Percent Score: divide the Area Raw Score by the Area Raw Score Possible, then multiply by 100.

RESULTS					
Test date	30 July		10 Nov		
Area Raw Score	11		18		
Area Raw Score Possible	50	50	50	50	
Area Percent Score	22%		36%		

APPENDIX 10: An Example of an Interview Transcript

Interviewee A
8/11/2010 Monday
2:10 p.m

Interview of Matthew's music therapy sessions

Researcher : So, emé you just observed Matthew sessions, so again, having observed the two video extracts, please comment on which is the earlier and which the later extract? And could you offer any reasons for your choice?

Interviewee A : yes sure! Emé first, yaé I found it a little bit to start with, emé I, I thought because him, Matthew seemed so familiar with the button on the keyboard and how he operated, I thought emé that set may have been the later one but I changed my thought later on, I decided the second one was the later one.

Researcher : er hun!

Interviewee A : emé he was using much longer sentences, more words for sentence and emé there was lot more emé lot more contact with the other people in the room.

Researcher : er hun!

Interviewee A : with, em with you and Line.

Researcher : hmm!

Interviewee A : emé to start with, he was quite distracted by getting his hat on his head right, emé the physical side of thing and but the camera, distracted him a little bit, then put me off wee bit to start with. But ya I think thatôs the later one, and the other is the first one.

Researcher : Em! Okay! So do you think Matthew engaged with the music in either or both of the sessions?

Interviewee A : the first one, he, he wasé but I thinké aé he, emé he was quite focused on the technical side of getting the keyboard operated rather than the music itself!

Researcher : hmm!

Interviewee A : emé and, but Iôm sure he enjoyed with the music as well, andé you knowé em he, he is waiting for his part. Emé waiting to give the instruction and the counting down, all those kind of thing seemed to be really important to him rather than the actual music itself.

Researcher : hmmé

Interviewee A : and the second one, he just seemed to be having such a great time. Em being part of the music, emé using the hammer to make music with, which is I thought was a, a lovely emé way to emé add in the, em to blend in the thing he is interested, the Bob the builder with making the music as well.

Researcher : hmmé

Interviewee A : andé ya!

Researcher : hmm! Okay, cool! I like your explanation. (*laughed*)

Interviewee A : (*laughed*) Okay!

Researcher : Alright, so, em do you think Matthew tried to communicate, well obviously is verbally, like in both?

Interviewee A : yeah! Emé in the first one, there were verbal responses but there were also really lovely eye contact. He, he would look up and, and make great eye, eye contact.

Researcher : er hun!

Interviewee A : emé the second one, the verbal, like I said before the verbal responses were, were longer and little bit more em complicated. Yes I need more jobé

Researcher : hmmé

Interviewee A : emé example, and now itôs finished, and, and that sort of thing. yeah that is good!

Researcher : hmm! Yup! Okay, so do you think Matthew showedé do you think Matthew showed interaction with me or Line or anyone in the music room? Likeé

Interviewee A : yeahé

Researcher : in which wayé ?

Interviewee A : in in the first one, he was, like I said he was showing eye contact and em waiting for instruction emé but then again he was more focused, I thought in set one on, like I said on the technical aspect of getting the the em, getting the right response from the keyboard, pushing the right button and thing like that. Emé the second one, emé he wasé emé ya, giving lot lot more verbal responses (Researcher: un hm!) and initiating the conversation little bit more than in the, in the first oneé

Researcher : hmmé

Interviewee A : emé andé emé yeah! He. emé you asked direct question of him, and he pointed out Line could emé could do something for him.

Researcher : hmmé

Interviewee A : get a more jobé thing like that

Researcher : ya ya! So do you notice any likeé say, expression or anything like that during those sessions?

Interviewee A : I thought he seemed more relax and less emé in the second one, em less concerned with getting things right or wrong. He was just having fun I think.

Researcher : more free?

Interviewee A : ya~

Researcher : hmm.

Interviewee A : ya ya~ I mean after after he got over the em the haté

Researcher : the hat. (Interviewee A: which isé)

Interviewee A : which obviously with physical distraction for him coz that was difficult for him to put on (Researcher: ya!) he was, you could see that in his face he was struggling with that (Researcher: ya!) and struggling with the camera thatôs the thing, once he got that right, you know, he was lots more relax and free and he could express himself more.

Researcher : Ya! sometime he liked to look into the camera and look at himself and Iôd say he is a handsome boy! (*laughed*)

Interviewee A : Oh! Heôs a boy! (*laughed*)

Researcher : ya! So emé so in that two different videos that I showed you, do you feel likeé does he show any different ways of expressing himself? Apart fromé

Interviewee A : obviouslyé

Researcher : using like like longer sentence (Interviewee A: ya!), anything like that. Any other different that you noticed?

Interviewee A : Well I know he was more relaxed and smiling in the in the second session oneé

Researcher : secondé

Interviewee A : ya~

Researcher : un hmm

Interviewee A : and and ya the facial expression, like I said when he was trying to get the hat right, you could tell something wasnôt quite right. He wasnôt, ya if I could think of what could happening in the roomé ya~

Researcher :ya~ so finally, do you have any comment on any other changes you have noticed in the child that seem relevant? And could be in the music or outside of the music. Any comment that you would like to draw on, that I havenôt ask you oré

Interviewee A : when Matthew comes in, em em in the morning, he often asks you to have music. I think thatôs thatôs a big thing, itôs obviously an impact on him, means a lot to him and something he really enjoys.

Researcher : hmmé

Interviewee A : Emé his responses when we do group music, heôs responding more now where before he might have sat and listened em or waited for somebody who actually physically move his hand oré andé you know, em prompt him to make response. Now that he, if we pause, he would make that responses so emé

Researcher : hmm

Interviewee A : that we, you know we could extend with it, he em he wants to give that particular timeé

Researcher : hmm~

Interviewee A : he would fill in the word or even is a song he hasnôt heard before, you know, if is counting or something, he can he can em fill those bit in, ya!

Researcher : ya! Is it quite spontaneous?

Interviewee A : Ya!

Researcher : un hmm

Interviewee A : I mean obviously take a little bit of time for him to respond, so that, thatôs Cerebral Palsy, needs time to process thing, so he wont be quicker than any other child at his ageé

Researcher : yup!

Interviewee A : but for him, heôs responding much quicker and lots more spontaneously.

Researcher : Ya! Ya! Is there anything else you wanna draw on?

Interviewee A : I donôt think so! no! yaé I just think emé obviously music therapy, from what Iôve seen, it makes a big difference for Matthew and I think itôs aé a great thing. Ya~

Researcher : yup!

Interviewee A : for both of the children, ya~ you knowé

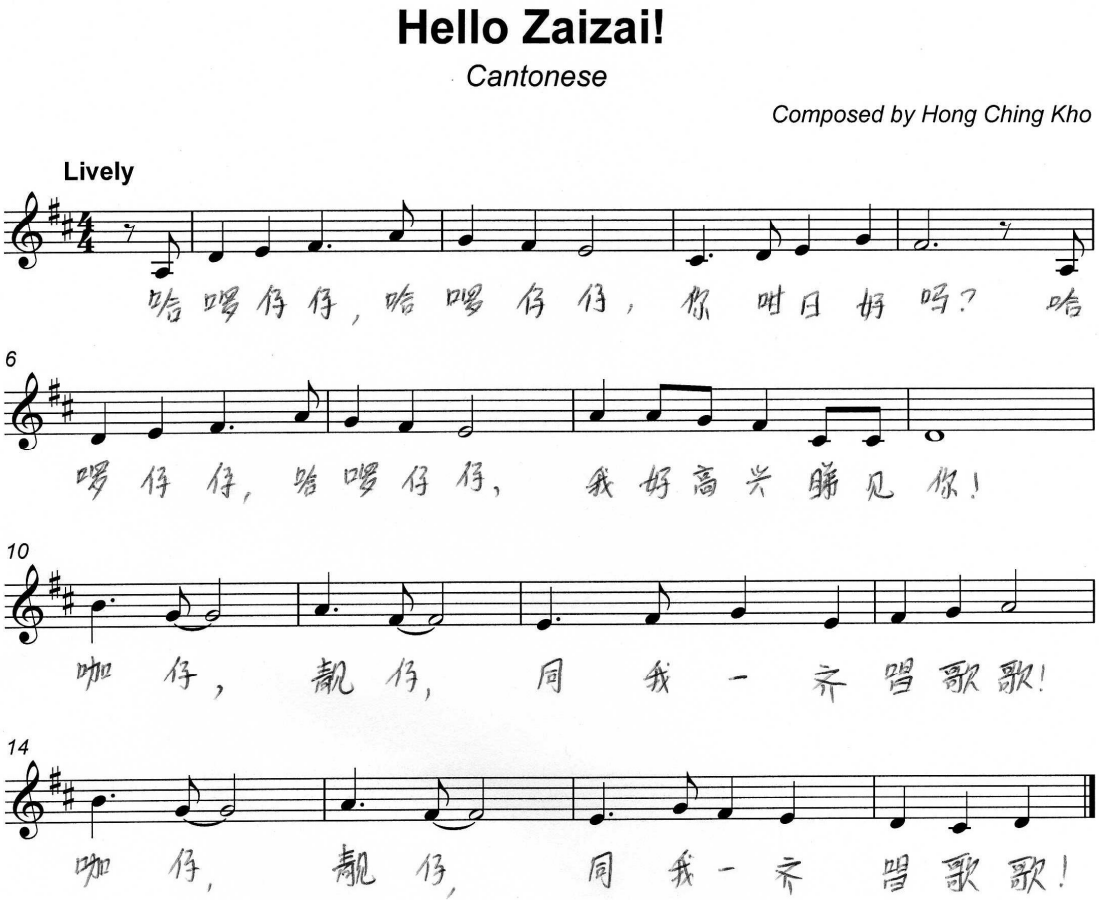
Researcher : yup! Itôs different. Because they are quite, emé although they both have Cerebral Palsy but the way we run the conversations are quite different.

Interviewee A : yup!

Researcher : When I worked with two of them, my approach is quite different as well, as you can see, using different way to approach and interact with them.

143 Interviewee A : Yaé ya I mean all children children are different, you use it with, you
144 know any two two children have have to respond differently to them
145 (Researcher: ya! The technique?), itôs just lovely toé I really enjoy it.
146 Researcher : Alright! Thank you very much for your valuable comments!
147 Interviewee A : youôre welcome!

APPENDIX 11: Cantonese Hello Song



Translation:

Hello Zaizai, Hello Zaizai, how are you today?

Hello Zaizai, Hello Zaizai, I'm glad to see you here!

Smart boy, handsome boy, come and sing with me.

Smart boy, handsome boy, come and sing with me.

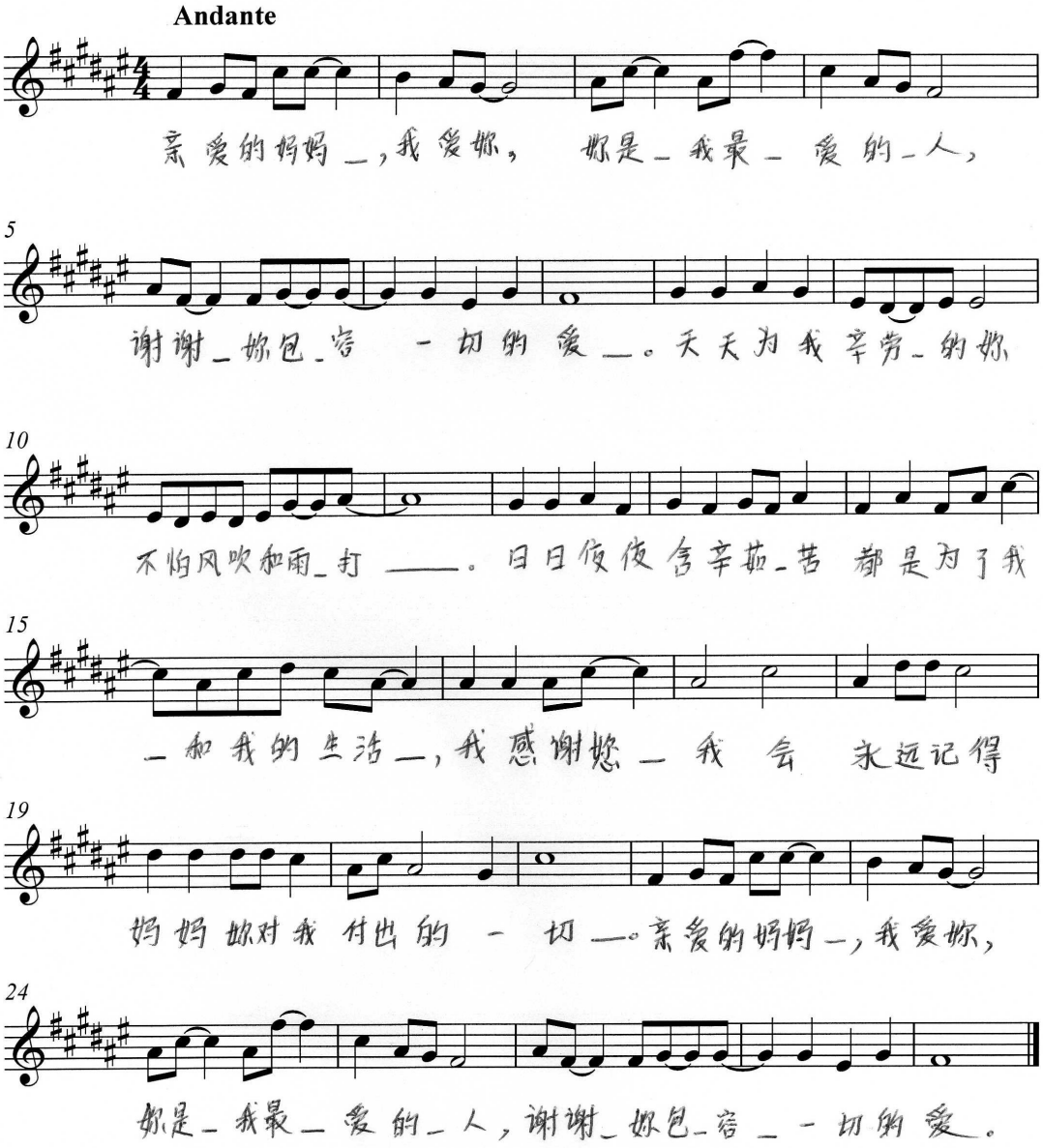
APPENDIX 12: Song from Zaizai Spontaneous Music Making

Delicated to Zaizai's mother

I Love You Mum!

Lyrics by Hong Ching Kho

Contributed by Zaizai
Rearranged by Hong Ching Kho



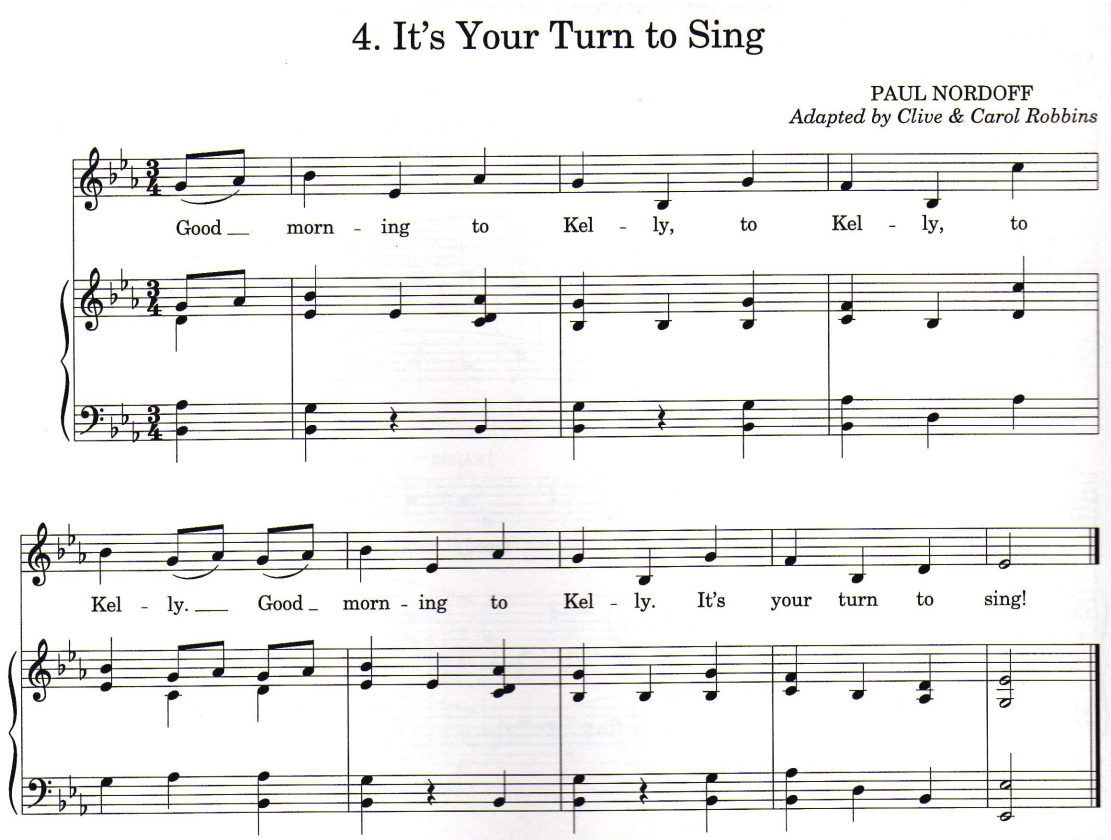
Translation:

Dear mother, I love you.
You are my beloved one, and thank you for you loves.

No matter storm or rain, you are always there for me,
looking after me day and night.

I am very thankful to you, I will always remember your love,
And everything you have done for me.

APPENDIX 13: It's Your Turn to Sing



Cited from (Nordoff, 1995)