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**Interaction within the Therapeutic Relationship: Exploring the Relationship between
the Music Therapy Practices of a Music Therapy Student and the Concepts Used in
Intensive Interaction**

An exegesis submitted in partial fulfilment of the requirements for the degree of

Master of Music Therapy

Te Kōkī New Zealand School of Music, Wellington

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Abstract

This research project explores the relationship between the music therapy practices of a music therapy student and intensive interaction, a teaching model of communication used with children, young people and adults who experience challenges with learning and relating to others.

Secondary analysis of clinical records (session notes and video footage) was used in this theoretical research, using both inductive and deductive methods of micro-analysis to explore the relationship between the two approaches. Themes included two relatively distinct forms of interactive communication – communication which predominantly used music and communication which used other modes. These two groups were then divided into further themes including: elements of music and improvisational musical techniques; visual cues; vocal activity; gestures and body language; movement activity and time/space. These themes were then correlated and compared with the corresponding features and descriptions of improvisational music therapy and intensive interaction.

The findings suggest there is a relationship between the concepts used intensive interaction and the improvisational music therapy practices of the music therapy student; they both share features of the naturalistic processes of ‘infant-caregiver interactions’ within the elements of music, with both parties fine-tuning to one another’s rhythmic, melodic, textural and temporal nuances. However, improvisational or creative music therapy combines more complex usage of the elements of music including musical form, structure and texture to provide an interpersonal experience through a therapeutic relationship. That relationship is reliant on the music therapist’s sophisticated skills to combine emotion and music within the improvisational process. The strengths and limitations of the study are stated along with implications for training and further research in the field of music therapy and special education.

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Ethical Statement

The Massey University Human Ethics Committee gave ethical approval for this project.

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1. Introduction

“Exploring the music within the interaction and the interaction within the music”

(Rainey Perry, 2008, p. 1).

1.1. Background

This exegesis explores the relationship between music therapy and the concepts used in Intensive Interaction practices. At the time of writing I was a second year Masters of Music Therapy student, on a nine month clinical placement at the Raukatauri Music Therapy Centre (RMTC), Auckland, New Zealand. The RMTC is a music therapy centre for adults, children and young people with special needs within New Zealand. The facility has requested that I name them in this research report.

1.2. My Developing Music Therapy Approach

RMTC was established in 2004 by a parent of a child who has cerebral palsy, who had experienced creative music therapy at the Nordoff Robbins Music Therapy Centre in London (RMTC, 2013). The first music therapist to be employed at RMTC was trained in the Nordoff-Robbins Creative Music Therapy approach. Over the years RMTC has grown and developed as further music therapists have been employed from overseas, and within New Zealand. Each music therapist applies his or her personal theoretical orientation or training to his or her practice and the music therapy models used at RMTC are therefore diverse. These might include, for example, approaches based on the medical model, which is concerned primarily with the physiological response to the music; the developmental model, where the individual helping of a child to reach his/her next developmental milestone is the priority; the psychodynamic model, which focuses on the inter- and intra- personal processes that influence the client’s thoughts and behaviour; and the humanistic model, a holistic, person-centred approach which focuses on creativity, personal choice and growth. Staff at RMTC have summed up their approach as “client-centred, music-centred, developmental and psychodynamically informed ... with a holistic view of the client and their needs in relation to their environment” (Molyneux, Willis, Talmage, Scoones, Travaglia, Gang & Piggot-Irvine 2011, p. 13).

Despite these eclectic influences on my music therapy practice, my training was highly influenced by the humanistic model. These influences together with my past experience as a teacher, which was underpinned by a client-centred, holistic view, have impacted on my developing personal music therapy approach. According to Barry & O’Callaghan, (2008) it is important that I acknowledge and reflect upon these influences as part of the contextual elements that impact on my understanding and practice as well as “(a) the clinical placement setting; (b) the clients, including their ethnicity and individual backgrounds; (c) other practitioners, such as one’s supervisor, including the paradigmatic frameworks informing his/her practice; (d) and the wider social-cultural context” to develop my personal practice style and “to suit the practitioner self within the clinical context”. (p. 59). This is further supported by Pavlicevic and Ansdell, (2004) who note that it is important for music therapists to consider aligning their practice with the philosophy and approaches used within the settings in which they work.

1.3. My Personal and Professional Background

My personal and professional background includes life experiences as a mother, private music teacher and school teacher. As a teacher I have worked with a range of children and young people with special needs and I am an experienced practitioner and leader in the implementation of the communication approach called Intensive Interaction. Intensive Interaction is a recognised approach to communication and teaching for children and young people who experience difficulties with learning and relating to others. It is used with children, young people and adults with a range of developmental and communication disorders including autism, learning difficulties, emotional and behavioural issues and intellectual and or physical disabilities (Nind, 1996).

Intensive Interaction appears to have common features with the type of interaction that occurs in music therapy. Essentially it is a process centred approach of ‘tuning-in’ or engaging with a person by sharing and exchanging a flow of behaviour (Hewett, 2012), identified as an interactive ‘conversation’. Most significantly, both models draw on the responses to the musical patterning of the contours and rhythm of movements, gestures, facial expressions and vocalisations that are present in the earliest communication between mothers and infants (Pavlicevic, 2000).

1.4. The Development of a Research Question

I have chosen to pursue this topic because I am currently working in music therapy with children and young people with special learning and communication needs and have become curious about the relationship between these two approaches. My personal interest and professional curiosity was further sparked when I read an unpublished paper which explored “the music within the interaction and the interaction within the music” (Rainey Perry, 2008, p. 1). Rainey Perry (2003, 2008) described how Intensive Interaction approaches use musical elements and how music therapists use multiple aspects of joint music making in interaction.

Thus, I will be exploring the relationship between what is predominantly a humanistic music therapy approach, and the naturalist teaching method of Intensive Interaction (Nind, 1996, 1999; Nind & Hewett, 1994; Hepting & Goldstein, 1996).

2. Literature Review

2.1. Introduction

The literature has been reviewed in two main areas, specifically: (1) Creative Music Therapy, also referred to as improvisational music therapy, which is the most predominant model of music therapy practiced at the music therapy centre where I was working, and which has naturally influenced my approach, and (2) the theory and practice of Intensive Interaction. Creative Music Therapy and Intensive Interaction are both underpinned by the concepts and principles of the humanistic philosophy of Maslow (Bruscia, 1987; Nind & Hewett, 1994). The concepts of Maslow found in creative music therapy include: the channelling of impulses, intrinsic learning and creativeness. These concepts are exemplified in Williamson & Barber's (2006) description of the features of Intensive Interaction referred to in Table 2. of the **Findings**.

Preliminary readings were focused on music therapy and children with special needs. These readings provided me with relevant and purposeful information to prepare me for the population that I was about to work with during my pending placement at Raukatauri Music Therapy Centre (RMTC). As my research project began to materialize and my focus narrowed I was able to limit the various readings and resources available to me. Therefore, client-centred music therapy, improvisational music therapy, humanistic theory and Intensive Interaction related articles were drawn from resources available to me at the RMTC and personal networking through my former role as a teacher of special needs children. I also accessed various databases such as Discover; Scopus, PROquest; SAGE Knowledge; PsycINFO, Google Scholar, and searched for a combination of terms such as '*music therapy*' and '*intensive interaction*'; '*music therapy*' and '*communication*'; and '*music therapy*' and '*interactions*'. Additional articles were sourced from music therapy journals, books and websites such as 'Voices: A World Forum for Music Therapy'.

2.2. Creative Music Therapy: The Humanistic Model

Bruscia, (1998) defines music therapy as "a systematic process of intervention wherein the therapist helps the client to promote health, using music experiences and the relationships that develop through them as dynamic forces of change" (p. 20). He suggests that the therapist combines his or her resources to provide clients with the opportunities for "receiving

empathy, understanding, validation, and communication; for feedback on themselves and insights about their lives; for motivation and self-transformation; and for direct assistance and intervention” (p. 21). Within the discipline of music therapy there are a number of different approaches that a music therapist can draw on (Wheeler, Shultis & Polen, 2005). However, interaction and engaging in a shared experience are fundamental to most models of music therapy.

The humanistic model, with its holistic and person-centred approach focusing on creativity, personal choice and growth of the client (Bunt & Hoskyns, 2002; Wigram, Pedersen & Bonde, 2002) has become dominant in my practice. This kind of approach encourages the development of non-musical and musical skills of the music therapy clients. Further, within my music therapy practice I focus on spontaneous play, to which the interactive creative freedom of improvisational music belongs. Paul Nordoff, (1998 cited in Robbins & Robbins, 1998) refers to the “wonderful creative freedom ... that we must have in therapy – but tailored to the child, suited to the child, challenging the child, stimulating, arousing, and supporting. We must have this beautiful creative freedom. And it’s nothing that’s given. You have to work for it” (p. 79).

Between 1959-1974 Paul Nordoff and Clive Robbins developed Creative Music Therapy, a model of improvisational music therapy grounded in humanistic philosophy. Creative Music Therapy was originally developed for use with children with intellectual, emotional and/or physical disabilities (Bruscia, 1987). Although the approach has evolved over the years and has been significantly influenced through the work of Pavlicevic (1990, 1995), Pavlicevic & Trevarthen (1989), Ansdell (1995) and Aldridge, Dagmar & Lutz (1996), its underlying philosophical premises, see below, have remained the same (Hadley, 1999; Mahoney, 2012). Creative music therapy is creative and individualized in that the music therapist creates and improvises music that is used as the therapeutic medium to connect and engage with a client as the music therapy session(s) evolves. According to Nordoff and Robbins (2007) every human being has the potential to respond to music regardless of adverse conditions and challenges. They described this potential as “the music child”.

The music child is therefore the individualized musicality inborn in every child: the term has reference to the universality of human musical sensitivity – the heritage of complex and subtle sensitivity to the ordering and relationship of tonal and rhythmic

movement and to the uniquely personal significance of each child's musical responsiveness (Nordoff & Robbins, 2007 p. 3).

It is this person-centred and holistic approach of responding musically to what the person communicates – body language, facial expression, sounds or vocalisations, well-being and disposition that provide the canvas for the musical interaction. Nordoff and Robbins (2007) describe their interaction as “responding musically to what his presence communicates: his bearing; facial expression; his glance, if he looks at you; his movements; his mood ... your aim is to communicate with him as he is”. Further, Wigram, (2004) whose music therapy work originates in Alvin's (1966) free improvisation approach, also describes basic therapeutic methods and skills with a humanistic perspective which include mirroring, imitating and copying, matching, empathetic improvisation, reflecting, and dialoguing, “a process where therapist and client/clients communicate through their musical play” (Wigram, 2004 p 97).

2.3. Music Therapy and Role of Imitation and Reflection

Imitation and reflection within music therapy enhances communication and develops basic social skills. Imitation can be defined as ‘a copy’ ‘the action of imitating’; follow as a model’ or to ‘be like’. Reflection suggests ‘a mirroring back’ or ‘reflecting back’ ‘a reflected image’ (Oxford Paperback Dictionary & Thesaurus, 2009). There are many music therapists who have written about imitative and reflective exchanges within the musical interaction (Alvin, 1966; Muller and Warwick, 1993; Oldfield, 2006; Oldfield and Flower, 2008; Pavlicevic, 1997; Robarts, 1996; Wigram, 2004). Juliette Alvin, (1966) stated “that imitation and repetition are two processes through which man learns, develops and creates. They apply to sound when it becomes a verbal or musical language” (p. 79). She also suggests, according to Aristotle, when we listen to the imitations we become connected with the feelings imitated, and that those feelings are separate from the rhythms and melodies expressed in the music. Further, Brown, (2002) when reflecting on the role of imitation or reinforcement of autistic behaviours, refers to Stern's ‘affect attunement’ where during an interaction between caregiver and infant, that which is being matched is not the exact behaviour but an aspect of it that reflects the child's mood at the time.

According to Tomlinson, (2012) music therapists (Ansdell, 1995; Aldridge, 1996; Bunt, 1994; Oldfield, 2006; Pavlicevic, 1997; Robarts, 1996; Ruud, 1998 and Wigram, 2004) have

for many years drawn inspiration from the parallels of their work with the developmental theorist Daniel Stern. Stern (1985) emphasizes the musicality of a mother and infant as they get to know one another intimately through the infant responding to musical patterning of rhythms of movements, and vocalisations which contain subtle shifts in vocal timbre, tempo and volume. Further, Stern (1985), suggests that the “dialogue does not remain a stereotypic boring sequence of repeats, back and forth, because the mother is constantly modifying imitations or providing a theme-and-variation format with slight changes in her contribution at each dialogic turn” (p. 139). Tomlinson, (2012) suggests that the imitation sequence does not remain in the ‘copy me – copy you’ state but “develops and evolves into something else, so the child’s interest and focus is retained” (p. 105). This reference to ‘something else’ is described by Stern, (1985) in his theory of ‘affect attunement’ in which the ‘feeling states’ of the infant are monitored and reflected back by the mother. This innate capacity by the mother to demonstrate an understanding of the infants emotional state is then reflected in the level of intensity that she imparts through the elements of exchange of pulse, rhythm, duration and contour of sound which are “highly relevant to the interactive musical exchanges in music therapy” (Tomlinson, 2012, p. 106).

This innate capacity as a human being to communicate musically is further evidenced by Trevarthen and Malloch, (2000) who have addressed how infants are born to attend to and stimulate intuitive music in parents’ vocalisations and how they imitate and reflect those expressions to develop a sense of self and shared meaning in close relationships (Robarts, 2009). Further, Trevarthen and Malloch, (2000) state “that the infant’s sympathy arises from an inborn rhythmic coherence of body movement and modulation of affective expressions” (p. 4). They believe that “underlying acquired musical motor skills and perception of musical form is an intrinsic ‘musicality’, and this is an aspect of motivation and emotion that has power to communicate” (p. 4). This human desire and need for purposeful engagement and empathy, referred to by Stern, (1985) as affect attunement and vitality contours, and defined further by Trevarthen and Malloch, (2000) as communicative musicality is, according to Molyneux (2013), considerably more than sounds. It also encompasses “the gestures and movements inherent in communicative musicality” (Molyneux, 2013).

2.4. Music Therapy and Autism

Music therapy is widely used with documented success among people with autistic spectrum disorder (ASD). Data for this research has been obtained from the records of three clients who have a diagnosis of ASD. Their function within the spectrum ranges from 'lower-functioning' with minimal functional speech and additional learning disabilities to high functioning autism with adequate to highly developed linguistic and intellectual faculties (Howlin, 1998 in Dimitriadis & Smeijsters, 2011). Most people on the autistic spectrum experience challenges in communication and social development and often display ritualistic and stereotypic behaviour. They are also often resistant to change (Dimitriadis & Smeijsters, 2011) and are sensitive to how others behave around them (Trevvarthen, 2002).

Over the years numerous studies have been published reporting on the interventions used in music therapy programmes with adults and children with ASD (Pavlicevic, 1997; and Robarts, 1996). A quantitative study by (Kim, Wigram & Gold, 2008) and a systematic review (Gold, Wigram & Elefant, 2006) provide some evidential support for music therapy for people with ASD. According to Pavlicevic, Ansdell, Proctor & Hickey, (2009, cited in Dimitriadis and Smeijster, 2011), "music therapy is a developmental, musical and interpersonal process which can contribute to the social and emotional integration of a person with ASD" (p. 109).

People with ASD often respond more positively to music than any other auditory stimulus (Gold & Wigram, 2006) and according to Alvin, (1966) music can draw on the strengths of a person and minimize their personal limitations providing them with opportunities of communication and self-expression. Therefore, the elements of music can support positive social interactions and facilitate verbal and non-verbal communication. Elefant, Gold & Wigram, (2010) suggest that the process of musical improvisation, because of its association with non-verbal language, may help people with ASD to develop and improve their capacity for social interaction and communication skills. Musical improvisation therefore enables people with limited or non-verbal communication skills to interact and engage on a more emotional level.

2.5. Intensive Interaction

Intensive Interaction is an approach to teaching and spending time with people with learning difficulties, communication challenges and distressed behaviour. According to Caldwell

(2006) Intensive Interaction was first introduced to Britain in 1986 by Ephraim, who at that time was the principal psychologist at Harperbury Hospital, an institution for people with severe and profound learning difficulties. During this period Hewett was headmaster of the school associated with the hospital and he together with a colleague Nind, developed Intensive Interaction to be part of the school's curriculum (Caldwell, 2006; Nind & Hewett, 1994).

Intensive Interaction is based on the model of caregiver-infant interaction with its theoretical underpinning of 'augmented mothering' described as the first relationship of mother-infant by Stern (1977, 1985). It involves vocalising, responding to people's body language and facial expressions through imitation, often in a playful manner (Ephraim, 1986 cited in Culham, 2004 and Caldwell, 2006). It is this close interaction that frames an infant's communicative and social development and the natural skills of parents or caregivers that provide the common ground for the interactive skills to develop. It is the intuitiveness of the parents that provide the framework of social interaction (Papousek, 1995 cited in Graham, 2004).

The model of communication is a social model and it emphasises the interactive process rather than the interactive outcome. It utilizes interactive games, movement and non-verbal communication. It makes sensitive use of "watching, waiting and timing, and contingent responding" (Nind, 1994 cited in Argyropoulou & Papoudi, 2012, p. 101). Further, Kellett, (2004) who examined the role of Intensive Interaction in interactive pedagogy for students with high and complex learning needs suggested its principal aims are to develop: sociability, fundamental communication abilities, cognitive abilities, and emotional well-being; and to develop and promote constructive interaction with the immediate environment (p.177). She highlighted the benefits of this approach and noted the improvements in communication such as increased physical contact and social behaviour (for example, increased eye contact, facial expressions and vocalisations). In addition to increased signs of improved social interactions and communication abilities, Intensive Interaction has also resulted in reductions in ritualistic and challenging behaviours (Nind, 1996; Caldwell, 2006).

The communication model of Intensive Interaction, according to Nind, (1996) has five central features: 1) that the practitioner is looking to create a mutual pleasure within the interactive activity 2) that the practitioner or communication partner adjusts his or her interpersonal behaviours (eye gaze, facial expressions, voice, body language) so as to become engaging

and meaningful to that person; 3) that the interactions or responses flow naturally between each other with pauses, repetitions and blended rhythms; 4) that whatever or however the participant responds that those responses are regarded as intentional responses with sensitivity and empathy and 4) that there is contingent responding to the participant's behaviour so that the participant is given control and 'lead' over their content and duration (Hewett, 2012).

Intensive Interaction is a naturalistic approach to communication (Caldwell, 2006; Graham, 2004; Hepting & Goldstein, 1996; Nind, 1996, 1999; Nind & Hewett, 1994) that seems to have parallel characteristics with various models of music therapy. During an Intensive Interaction 'conversation' the practitioner 'tunes in' using the intervention of imitation as a point of reference, to the client's body language, facial expression and vocal sounds (Caldwell, 2006) just as a music therapist tunes in or becomes attuned to the client by using techniques of empathy (for example imitation or matching) within an improvisational music therapy approach to elicit a musical response. Brown, when discussing the imitation of or reinforcement of autistic behaviours (2002, cited in Bunt and Hoskyns, 2002) refers to Stern's 'affect attunement' where, during an interaction between caregiver and infant, that which is being matched is not the exact behaviour but an aspect of it that reflects the child's mood at the time. Matching, imitation or 'modified reflecting back' as it is referred to by Nind and Hewett (2005) is about capturing an aspect of the person's behaviour and celebrating that response with that person in a naturalistic way. By noticing a sound, or movement or a facial expression and giggling or laughing in response to your own attempt at reflecting back creates an atmosphere of informality and light-heartedness. To remain humble and socially connected with that person will ensure the fundamental importance of mutual involvement and mutual pleasure (Nind, 1996) is adhered to during an interactive 'conversation'.

Other countries around the world have developed approaches similar to Intensive Interaction. Co-Creative Communication, for example, is used by Nafstad and Rodbroe (1999, cited in Caldwell, 2006) in Nordic countries. Their aim is to "stimulate the development of interpersonal communicative relationships" (Caldwell, 2006 p.276). Caldwell, (2006) states that the approach shifts the dynamics of the relationship, towards equal balance between participants. She also confirms that in America there is the Son-Rise Approach which has many similarities to Intensive Interaction but puts the emphasis on using a designated space

within which to interact. In contrast, others claim it is best to use any given time and any place during the day to interact with a participant (Caldwell 2006; Hewett, 2012).

Nind, 1996, 1999; Nind & Hewett, 1994, 1996; Caldwell, 2006; Argyropoulou & Papoudi, 2012 have documented evidence to support the implementation of Intensive Interaction for the improvement in social interaction and communication with children and young people whose learning difficulties are compounded by autism. According to the DSM-IV-TR (American Psychiatric Association, 1994) autism involves “impairments in reciprocal social interaction, failure to develop relationships with peers, and lack of spontaneous interaction, social or emotional reciprocity”.

2.6. Music Therapy and Intensive Interaction

I have diligently searched for material that has been formerly published on ‘music therapy’ and ‘Intensive Interaction’ as a joint subject matter. I have had limited success in obtaining formally recognised material from either subject. However, Karen Finter and Mary Rainey Perry, both registered music therapists in Australia, have each presented papers at various Intensive Interaction conferences. The paper referring to “the interaction in the music and the music in the interaction” was written and presented by Rainey Perry at the inaugural ‘Down Under’ Intensive Interaction Conference in Brisbane in 2008. She described how Intensive Interaction approaches use musical elements and how music therapists use multiple aspects in joint music making in interaction. She suggested that there were similarities between the improvisational musical techniques of music therapy and Intensive Interaction interventions. (Rainey Perry, 2008). Further, she noted the musical aspects of early communication; pitch and melodic elements, rhythm, theme and variation and vitality affects and dynamic form as being common to both approaches. She also referred to the musical frameworks of singing or vocalising and the features of music in multimodal interaction; the mother/infant interaction of vocal, body and facial movement and the multimodal interaction during music therapy of vocal and instrumental interaction and facial expressions, movement, eye gaze and proximity. Further, she discussed the significance of sharing of songs as a resource for interaction. Rainey Perry’s presentation was drawn from her earlier published paper in the *Journal of Music Therapy*, (15 (3), 2003) where she described “the patterns in the communication of 10 school-aged children with varying levels of pre-intentional or early intentional communication skills and how the consequences of disability affected children’s

communication” (Rainey Perry, 2003 p. 231). She found that “children at different levels of communication varied in their abilities to initiate, anticipate and sustain participation in turntaking and to maintain attention to and engagement in the interaction”(Rainey Perry, 2003 p. 227). It was these findings that formed the foundation of her presentation at the Intensive Interaction Conference, Brisbane, 2008.

During this same conference Finter, (2008) referred to the general aims of Intensive Interaction and music therapy and shared her observations of the parallels she had made between both approaches. She referred to the role of the music therapist who facilitates active involvement (Nordoff & Robbins, 1977) during a music therapy session, and the role of an Intensive Interaction practitioner whose position, during an Intensive Interaction ‘conversation’ was to be

relaxed, non-directive and responsive. In fact a central principle is that the teacher person builds the content and the flow of the activity by allowing the learner basically to lead and direct, with the teacher responding to and joining in with the behaviour of the learner. As this (interaction) happens, the fundamentals of communication are gradually rehearsed and learnt in a free flowing manner (Hewett cited in Finter, 2008).

Further, she referred to the similarities between the techniques used in both approaches: for example in Intensive Interaction: the creation of interactive games, being together within an activity and enjoying each other, engaging in turntaking, burst-pause games, imitation, anticipation and negotiation; (Barber, 2005, cited in Finter, 2008) and in music therapy: mirroring, matching and guiding responses, improvisation and spontaneous song writing/singing to validate responses (Wigram, 2004; Nordoff & Robbins, 1977).

With these pointers and my personal interests I was interested to examine my own practice to see what links I could find with Intensive Interaction.

2.7. Summary

This literature review has explored the two models of interactive communication – Creative Music Therapy or improvisational music therapy and Intensive Interaction. It has referred to the theoretical foundations of both models of interactive communication with each model having its theoretical orientations based on the principles of a humanistic or ‘natural’ approach. The literature also suggests that there appears to be an underlying relationship

between them with concepts of Maslow, for example channelling of impulses, creativeness (Bruscia, 1987) found in both. It also discusses the features and techniques which appear to be common in both, for example, the role of imitation and reflection. Additionally, it refers to communicative musicality in the context of music therapy which describes the function of music which helps to develop a child's sense of self and shared meaning in close relationships – that innate musicality which resides in all of us that does not depend on musical training (Robarts, 2009). However, there is limited literature available to confirm there is a relationship between the concepts used in Intensive Interaction and creative music therapy practice. An examination of how my own music therapy practice relates to the concepts used in Intensive Interaction is likely to improve my learning while adding to this limited literature base.

2.8. Research Question Restated

What is the relationship between the Intensive Interaction model of communication and a student music therapist's practice at a centre for children and young people with special needs?

3. Methodology

3.1. Purpose

The purpose of this research project is to develop and increase my understanding of the seemingly naturalistic communicative responses, also known as interactive responses, which contribute to and form part of my music therapy practices and which align with the interventions and practices used during Intensive Interaction. I am curious to learn about what appears to be a fundamental communication ‘stimuli’ during the interactive process of imitation and reflection between two people during a specified time-frame in a music therapy session. The question of how to communicate with children who have special needs is often a high priority with staff in special education. The extent of usage of Intensive Interaction by staff in special education settings in the United Kingdom, Europe and Australasia has increased considerably following the Department of Health 2001 White Paper, cited in Leaning & Watson, (2006) in which a person centred approach was advocated as essential to delivering real change in the lives people with learning disabilities, and a response to that White Paper titled Valuing People with Profound and Multiple Learning Difficulties (PMLD Network undated, cited in Leaning & Watson, 2006) recommended “the need for training in effective communication strategies, multi-sensory approaches and Intensive Interaction” (p. 25). Further, following Kellet’s (2004) examination of the role of Intensive Interaction in interactive pedagogy with students with severe and complex learning difficulties she recommended approaches that are student-centred with flexible curricula such as Intensive Interaction to become recognised and form part of educational practices within special education. Finding more about the intricate relationship between Intensive Interaction strategies and music therapy interventions might therefore help a range of professionals improve their practice.

3.2. Theoretical Research

This study is characterized as theoretical research. According to Bruscia, (2005) the main purpose of theoretical research is to test and evaluate theories by finding relationships among variables. Further, Bruscia suggests that theoretical research can be employed to “explicate patterns that underpin practice” (p.540) so that new understandings might be achieved. Further, by defining the topic and making clear what is already known (parallels between interventions of music therapy and Intensive Interaction) and describing and reflecting upon

my music therapy practice (secondary analysis and microanalysis, see methods and data analysis below) I have gained new insights into the two approaches.

3.3. Secondary Analysis

This research involved secondary analysis of data. Secondary analysis also known as ‘auto data’ has been described as both a methodology and a method (Heaton, 2004). Auto data refers to the gathering and reusing of one’s own data from casework. Clinical data including clinical notes, video footage and journal entries collected over a twenty week (two school term) period, has been subjected to “internal secondary analysis” (Heaton, 2004 p. 15) where the process of gathering and analysing the data is completed entirely by the researcher. Please see **Methods** for details of this internal secondary analysis process.

3.4. Microanalysis of Data

I have engaged in microanalysis of video data. Wosch and Wigram (2007), describe microanalysis as a “detailed method investigating microprocesses. Microprocesses are changes and or progressions within one session of music therapy. The amount of time can be one minute or five minutes of one session, one clinical improvisation or one complete session” (p.22). The focus can be on minimal changes in relationships or interactions between people. This kind of analysis is particularly relevant to this topic because of the attention given to the minute subtleties in responses that occur during both musical and Intensive Interaction exchanges. I have drawn on Holck’s (2007) “ethnographic descriptive approach to video microanalysis” (p.29). An ethnographic approach involves observations of everyday settings in order to understand and make meaning of the actions in their social context (Silverman, 1993; Wolcott, 1990 cited in Holck, 2007). Observations in this context are highly relevant due to the non-verbal challenging communication needs of the music therapy clients reflected on in this research. Further, Holck suggests that this kind of approach is “very useful in recognising small indicators of communication and social interaction” (p. 29).

Please see **Methods** for a description of the video analysis process which I used.

3.5. Inductive and Deductive Coded Analysis

During the video analysis process I have also engaged in a general inductive analysis approach (Thomas, 2006) to analyse the qualitative data which emerged from the narrative analysis of each of the six individual music therapy sessions. An inductive approach allowed for the dominant themes to emerge from the data, rather than being coded in advance.

I also used a deductive analysis approach (Marks & Yardley, 2004) to search for, record and develop two (2) constructs for analysis of the data.

Descriptions of the features of improvisational musical techniques adapted from Bruscia, (1987), Wigram, (2004) and Rainey Perry, (2008) have been included in the **Findings** at Table 1. I have applied Bruscia's (1987, p 535) headings and definitions relevant to my music therapy practice, from his documented list of 64 clinical techniques in improvisational music therapy to frame and include the basic improvisational techniques and features from Wigram, (2004) and Rainey Perry (2008). I felt that everything was relevant and therefore needed to be included in this table. The features of Intensive Interaction, adapted from Williamson & Barber, (2006) with descriptions have been included in the **Findings** at Table 2. I used a deductive approach (Marks & Yardley, 2004) by searching the descriptions of my sessions for the features of Intensive Interaction.

4. Methods

4.1. Data Sources

All the data used in this study was gathered from my clinical practice and has been the subject of secondary analysis. There are no direct participants in this research.

Data sources are as follows: video footage, clinical notes, my reflective journal and literature. Data was gathered from the clinical data I have generated during my work at RMTC which are kept as part of the daily practices and procedures of the RMTC. The video footage routinely forms part of the clinical data capturing the student and the music therapist during a music therapy session; the clinical notes are hand-written records of significant happenings, behaviours and responses in relation to the goals and focus areas for the individual client during the music therapy session. My reflective journal, which contains my thoughts, (including questions and interpretations), feelings and responses relating to my music therapy practice (s), has been a source of information to contextualise the analysis and normalize this research journey (Barry & O'Callaghan, 2008).

The clinical data (video footage and clinical notes) that I have gathered to analyse is from two individual music therapy sessions from each of three music therapy clients gathered over a twenty week (two school terms) period. This time-frame also includes music therapy sessions delivered during the assessment period of a music therapy programme. Video data is the major source from which I have closely examined the musical and other forms of communication that occur between the music therapy clients and me.

4.2. Research Process

Video data and clinical notes were collected for clinical purposes and reused for research purposes. Informed consent was obtained from three music therapy clients, to use their clinical data for this research. Video data from six music therapy sessions was chosen and viewed by time sampling (two sessions from each of the music therapy clients). Each sequence of video data consisted of a five minute observation. Four of the six sequences were taken from the tenth to the fifteenth minutes and two of the six sequences were taken from the fifth minute to the tenth minute. A technical problem prevented me from obtaining the video data from the tenth to the fifteenth minutes of one of the sessions. After discussion

with my supervisor it was decided to obtain video data from a different time-frame (fifth to the tenth minutes). Two constructs were designed drawn from existing descriptions in respect of improvisational musical techniques and Intensive Interaction interventions. By applying existing descriptions of both models (improvisational music therapy and Intensive Interaction) I was able to code and identify themes that emerged from the raw data. As a music therapy student it was important that I became familiar with the language of the work. This prior knowledge enabled me to understand the research question from the beginning stages. My clinical notes provided background and context for the video data. I also referred to my reflective journal to support my personal feelings and thought processes about the various communication ‘tools’ that I applied during my music therapy practice. The data analysis process is referred to in detail below.

4.3. Data Analysis – Analysis Procedures

1) Developing a Construct of Improvisational Musical Techniques

- a. I read Bruscia’s (1987) and Wigram’s (2004) improvisational musical techniques. I also referred to Rainey Perry’s (2008) unpublished research.
- b. I reviewed chapters from the abovementioned books extensively and **listed the improvisational musical techniques** in one column in table format.
- c. In another corresponding column I **described the features** or interventions.

Please refer to **Findings** Table 1. for details of the Construct of Improvisational Musical Techniques which I developed to analyse the data.

2) Developing a Construct of Intensive Interaction

- a. I read eleven articles and three books which focused specifically on Intensive Interaction (Argyropoulou & Papoudi, 2012; Barber, 2007; Caldwell, 2006; Culham, 2004; Firth, 2008; Firth, Elford, Leeming & Crabbe, 2007; Kellett, 2004; Nind, 1996, 1999; Sharma & Firth, 2012 and Zeedyke, 2009 in respect of the articles and Caldwell 2007; Hewett, Firth, Barber & Harrison, 2012; Nind & Hewett, 1994 in respect of the books). I also accessed unpublished research by Finter, (2008) and Rainey Perry (2008).
- b. I chose two articles which had been published by seminal authors/practitioners in the field and described the features of Intensive Interaction in detail.
- c. I reviewed the chosen articles in detail and **listed the features** that had been mentioned in one column in table format.

- d. In another corresponding column I **described the features** or categories of Intensive Interaction.

Please refer to **Findings** Table 2. for details of the Construct of Intensive Interaction which I developed to analyse the data.

- 1) Video Analysis using Windows Win DVD

To contextualise the video segments I:

- a. Reviewed my clinical notes and journal entries.
 - b. Used the review to write a brief summary of the music therapy client's background, including diagnosis and reason for referral to music therapy.
 - c. Viewed the session as a whole to gain a sense of how the child/young person was managing in this particular session, and adding a sentence or two about this to the background summary.
- 2) The microanalysis of each segment involved
 - a. Viewing the selected five minute segment stopping after each 'event' (approximately every five seconds).
 - b. Reviewing the 'event' second by second and **describing in detail** (in two separate columns on a timeline on a first excel sheet (#1), refer Appendix 8. for sample of Raw Data), the mutual responses of student music therapist and child/young person.
 - c. Reviewing the recorded observations and **categorising the interactions** from a music therapy perspective (mirroring, matching, imitation, and receding etcetera) in a third column.
 - d. Reviewing the recorded observations and **categorising the interactions** from an Intensive Interaction theoretical perspective (giving good face, imitation, turntaking etcetera) in a fourth column.
- 3) Writing Narrative Transcripts and Coding the Data
 - a. I wrote a detailed narrative description, called narrative transcript, (refer Appendix 9. for sample of Raw Data Narrative Analysis) of each five minute segment from each of the six music therapy sessions.
 - b. I used inductive analysis to code the emerging themes or categories from the six music therapy sessions by using the word processor 'comments' field. (Refer to Appendix 10. for sample of Theme/Coded Analysis).

- c. I grouped my music therapy practice into two main categories: musical and non-musical communication.
- d. From the two main categories of musical and non-musical communication I developed sub themes for example, improvisational musical techniques, visual cues, vocal activity, movement activity, gestures and body language and time.
- e. I used deductive analysis to search for and record improvisational musical techniques used in my music therapy practice.

4) Comparing Music Therapy Practice and Intensive Interaction

To compare my music therapy practice and Intensive Interaction:

- a. I recorded on a second excel sheet (#2), (refer Appendix 11. for sample of Raw Data Correlations), one per music therapy client, for each five minute segment from each of the two music therapy sessions, sourced from the first excel sheet (#1) and the narrative transcripts, a list in one column the improvisational technique used.
- b. I recorded in a second column a list of the non-music communication modes.
- c. I recorded in a third column a list of the Intensive Interaction features.
- d. I considered the list of features from Intensive Interaction alongside the categories of interaction (music and non-music) from the music therapy sessions.
- e. I sorted the three lists from 6.a, 6.b and 6.c according to the similarities and differences in the way they had been described.
- f. I described and discussed the findings in narrative form.

4.4. Generalisation of Findings

This research is based on secondary analysis of data gathered from my placement at the RMTC for children and young people with special needs. While this research will be relevant and add to my learning and practice as a music therapist, and possibly to the learning of other music therapists, it is not expected to be generalizable. However, it may be read, and be recognised as valuable by others who work in special education.

4.5. Ethical Issues

At the time of writing this research project I was a student of Masters of Music Therapy programme at the New Zealand School of Music. My supervisor is Dr Daphne Rickson, a registered music therapist. The Code of Ethics for the practice of music therapy in New Zealand (New Zealand Society for Music Therapy, 2006) and the code of ethical conduct for research, teaching and evaluations involving human participants (Massey University, 2010) were upheld throughout the research process. The research process took place over a six month period. The Massey University Human Ethics Committee gave ethical approval for this project. Please refer to Ethical Statement page v.

RMTC requested that they be named in this research project. This may have potentially been difficult for families, since it increased the likelihood that the children might be identified. Families were informed that the risk of identification was high. Informed consent was obtained from the RMTC for the use of the clinical data belonging to the Centre. (See Appendix 1. and Appendix 2.) The video footage, which formed part of the clinical data, has not been shared in this research project for reasons of confidentiality.

Although there were no primary participants in this research, I obtained informed consent from the children and young person's parents to review the clinical data. Parents were required to give their consent for their children under the age of 17 years. (See Appendix 3. and Appendix 4.). I obtained assent from the child and young person who were seen as confident to give consent for their data to be used in this research. (See Appendix 5.)

Informed consent to review my supervision notes was also obtained from a team member of the RMTC, with whom I worked closely and was assigned to me as my clinical placement supervisor. (See Appendix 6. and Appendix 7.).

Information sheets were provided to the music therapy clients in the appropriate language. The children, young person and their families had the opportunity to withdraw their consent before the analysis stage of the research commenced.

Pseudonyms have been used for the music therapy clients. I have approached this research with sensitivity based on my prior knowledge and experience. Confidentiality has been

upheld throughout this research project. Anonymity could not be maintained because of my position as a researcher and music therapy student. A warning to this affect was explained in the information sheet given to the parents of the children and young person at the RMTC.

As a researcher, I am mindful of the limitations due to my personal bias during the process of obtaining the data from the clinical notes and video footage of the children and young person. Therefore the data has included my response to the various therapeutic relationships and musical interactions that emerged. Collectively, this data has been used for a different purpose for which it was originally intended (for instance, the children and young person's therapeutic development). This issue has been addressed as part of the informed consent process mentioned above. The clinical records became research data four-six months after it was recorded. The researcher did not use deception at any stage of the process.

Upon completion of the project a full research report will be disseminated to the RMTC. A brief summary of the results of the project will be provided to the families of the children and young person who may be represented in the data.

5. Findings

The music therapy clients, who are also referred to collectively as children in this study, have been given pseudonyms for reasons of confidentiality.

5.1. Toby

Background

Toby was a young person with a reported interest in music as his main area of self-expression. He has a diagnosis of Autism Spectrum Disorder (ASD) as defined by DSM-IV-TR criteria (American Psychiatric Association, 1994). Toby has been referred to music therapy by his assigned carer from residential care accommodation where he lives. Toby has functional expressive and receptive communication and is able to attend to his personal needs. He has repetitive use of language (echolalia) and has a range of repetitive mannerisms which include flapping of paper or small objects. Toby enjoys music and likes to sing. He has a wide repertoire of songs from his favourite nursery rhymes to The Beatles. Toby will leave school at the end of the year to become part of a community based programme. It was hoped that music therapy would assist him with transition from school to the community programme and provide Toby with an opportunity to develop his self-expression and increase his enjoyment in music.

Music Therapy Context

Session 3 1 of 2 (1/2):

This five minute segment begins after five minutes from the beginning of the session. Toby arrived early at RMTC with a support person from his community based living accommodation. It is very challenging for Toby to sit still and wait in any situation. On arrival at the Centre and in readiness for his session Toby went directly to the music therapy room and was sitting in the music therapy room waiting for me to arrive. Toby had acquired a pamphlet from the reception area and was flicking it. Toby vocalised “oh, oh, oh” with animation and excitement in his voice as I walked into the room and sat directly opposite him. There was a large gathering drum between us. Toby became increasingly excited. He smiled and bounced up and down on his chair. I copied his actions and captured the pulse on the gathering drum. Toby looked at me and then stood up and reached for the guitar and passed it to me. He looked at me and said “Hot Cross Buns”. He then sang the beginning of

the song with me and then moved to reposition himself closer to the piano. Toby sat on the piano stool with his back to the keyboard and used his left hand to play single note phrases of the songs he wanted to sing. Toby is able to sustain the pulse and rhythm patterns of songs and music familiar to him.

Session 7 2 of 2 (2/2):

This segment is from Toby's seventh music therapy session. Taylor arrived at the Centre in what seemed to be a happy space. He was smiling and appeared excited to be in the music therapy room. He stood and waited with anticipation near the instruments for me to enter the room, before he sat near the upper register of the piano. He made eye contact and smiled at me as I adjusted the piano stool before sitting down. It was as if every move I made was under his scrutiny. Toby began playing the piano (using hands, index and middle fingers simultaneously) in a rigid and vigorous manner at a moderate tempo and singing "Hot Cross Buns". He emphasized the words as he accented the strong pulse of each bar. Toby returned to this familiar structure throughout the music therapy session. From time to time he began to engage with me while I intervened with a range of music therapy techniques. The minute prior to the beginning of this segment Toby was engaged in random glissandos using his right hand wrist and moving his upper body from side to side up and down the piano. Using his right hand, he then began to play single notes in a random manner, sometimes pausing and looking at me, as if waiting for a response.

5.2. Nigel

Background

Nigel was 12 years old at the time of this music therapy session. He has a diagnosis of Autism Spectrum Disorder (ASD) and Attention Deficit Hyperactivity Disorder (ADHD) as defined by DSM-IV TR criteria (American Psychiatric Association, 1994). It has also been reported that Nigel has anxiety and low self-esteem. He was referred to music therapy by his mother. At that time Nigel was receiving support from a health agency for adolescents who may be experiencing a first episode of mental illness. It is hoped that music therapy will support Nigel to feel more relaxed and increase his self-esteem and will assist him to find bridging and coping strategies as his therapy at the health agency comes to an end. Nigel enjoys classical music and learns keyboard and guitar at school.

Music Therapy Context

Session 4 1 of 2 (1/2):

This 5 minute segment is from the 10th minute of Nigel's fourth music therapy session. The session lasts for approximately 30 minutes. From the first music therapy session Nigel had demonstrated a curiosity and interest in the technology used to record the music therapy sessions and a desire to "learn to play the violin" (Nigel, session 1. 25.2.13) Nigel's interest in the video recording equipment progressed and developed over the assessment period. Music therapy session 4, was independently videoed by Nigel. He demonstrated patience, logic and perseverance as he assembled and operated the video equipment. He did not request my assistance, although I curiously asked about the technology, expressing to him my very limited and poor skills in respect of video cameras. Nigel willingly shared his knowledge and skills with me, explaining in detail what he was doing and the reasons why. Once the video camera was set up and the tripod carefully positioned (sufficient light, correct angle) I invited Nigel to choose the instrument he would like to play. He chose the violin. This was the first time Nigel had ever used a violin. Once again, Nigel demonstrated a range of responses. At first he appeared curious as he cautiously explored and negotiated ways to play the violin. He then became frustrated with the sounds he was producing. However, he remained focused and engaged in exploring the violin for twenty minutes during the session.

Session 6 2 of 2 (2/2):

This 5 minute segment is from the 10th minute of Nigel's sixth music therapy session. The session lasts for approximately 30 minutes. The session began with Nigel adjusting and positioning the video camera equipment ready to video the music therapy session. Nigel independently recorded the entire session. Nigel's independent use of the video recording equipment has been formally recorded in the goals and focus areas of the music therapy process. By focusing on the use of this technical equipment, including the use of a laptop during the music therapy sessions, this has provided an opportunity for Nigel to meet his personal interest and to share his knowledge and competence with me. It is proposed that this strategy links with the long-term goals of building Nigel's developing self-confidence and self-esteem.

While he was adjusting the video equipment I sat waiting for him at the piano, near the middle to lower registers. After about three minutes I began playing an improvisational

passage which was reflective of the activity in the room and Nigel's seemingly cheerful and happy disposition. Nigel joined me at the piano, playing the upper register. He immediately changed the tempo from moderate to slow and juxtaposed the pulse with ascending and descending circular dissonant phrases of sometimes 'non-rhythmical' statements seemingly seeking resolution and then closing abruptly with carefully constructed chords. A feature of Nigel's inter-relational strategies is for him to abruptly change the subject or task at hand, often with a sense of urgency, by asking a question or noticing and or commenting on something that is of immediate interest to him. Just prior to this five minute segment Nigel had drawn my attention to the wooden casing and external blemishes and marks on the lid of the piano. As he rubbed his hands over the lid he said "It looks old and cracked, how old is it?" We discussed the likely history of the piano and when Nigel was satisfied with the response I offered he closed the piano lid and moved away from the piano to look at the laptop on "lesson one, how to play the violin". By using technology to support Nigel's request to learn the violin, this also met my needs to support Nigel as best I could – given that I am not a violin player. I told Nigel that I was not a violinist but I would support him in every way possible to enable him to become familiar with the instrument in order to produce some creative sounds. The segment begins with Nigel sitting on the piano stool at the laptop screen.

5.3. Liam

Background

Liam was 3yr 8mths old when this music therapy session occurred. He has a diagnosis of Autism Spectrum Disorder (ASD). Liam has been referred to music therapy to develop his communication skills and increase his awareness of others. He currently communicates by vocalising, eye gazing and gestural and or physical contact of a familiar adult to attend to his needs. Liam responds to his name and single-tasked directions, for example, assisting with tidying-up of toys. Liam was referred to music therapy by his mother through his Speech Language Therapist.

Music Therapy Context

Session 3 1 of 2 (1/2):

This five minute sequence is from Liam's third music therapy session. His mother was present in the music therapy room during the music therapy session. During this session Liam was enthusiastically exploring the range of instruments (piano, large gathering drum, xylophone and assorted smaller percussion instruments in the basket) available to him. He had become interested in the venetian blind and the scene outside the window only moments before this five minute segment.

Session 5 2 of 2 (2/2):

This five minute sequence is from Liam's fifth music therapy session. His mother was present in the music therapy room. During this session Liam was exploring the range of instruments available to him, with short little bursts of activity on the instruments. He seemed very interested in playing the piano during this session with fleeting moments of eye-contact with me as I provided imitative patterns and phrases to accompany his repetitive single note patterns. He became interested in exploring the cymbal and snare drum. The five minute segment commenced during this exploratory play.

5.4. Research Question and Findings

What is the relationship between the intensive interaction model of communication and a student music therapist's practice at a centre for children and young people with special needs?

The findings from my music therapy practice have been divided into three sections. The first section describes the two distinct forms of interactive communication 1) communication which is predominantly musical and 2) communication which predominantly uses other non-musical modes identified in my music therapy practice. The second section discusses the features of intensive interaction which appear in my music therapy practice and the third section refers to the relationship between my music therapy practice and intensive interaction.

5.6. Constructs Used to Analyse Findings

Two constructs were developed to analyse the findings one which described the techniques and interventions used in improvisational music therapy, see Table 1. below and the other which described the features of and descriptions used in Intensive Interaction, see Table 2.

Table 1: Techniques and Interventions in Improvisational Music Therapy

Drawn from Bruscia, (1987), Rainey Perry, (2008) and Wigram, (2004)

| Techniques of Empathy | Description |
|-----------------------------------|--|
| Imitation or Copying* | Empathic technique of music therapist giving message to the client that he/she is being met exactly at his/her level in an attempt to achieve synchronicity with the client (Wigram, 2004) 'Echoing or reproducing a client's response after the response has been completed' (Bruscia , 1987 cited in Wigram, 2004) |
| *Copying | As above |
| Synchronizing (acting together) | Doing what the client is doing at the same time (Rainey Perry, 2008) |
| Differentiating (acting together) | Improvising simultaneous music that is separate, distinct and independent from the client's music yet compatible (Rainey Perry, 2008) |
| Incorporating: (imitation) | Using a musical motif or behaviour of the client as a theme for one's own improvising or composing, and elaborating it (Rainey Perry, 2008) |
| Pacing (mood and energy) | Matching the client's energy level (i.e. intensity and speed) (Bruscia, 1987 p. 535) |
| Matching | Empathic method/technique produced by the therapist in response to the client which confirms and validates their playing and their emotional expression. It is improvising music that is compatible, matches or fits with the client's style of playing while maintaining the same tempo, dynamic, texture, quality and complexity of other musical elements (Wigram, 1999a, cited in Wigram, 2004) |
| Mirroring | Doing exactly what the client is doing – musically, expressively and through body language at the same time the client is doing it. It is usually necessary to use a similar instrument as the client. (Wigram, 2004 p. 82). |
| Close Enough Mirroring | Where the therapist is doing almost exactly the same as the client but due to technical reasons cannot copy exactly e.g. client is randomly playing a metalophone, the therapist mirrors that by playing as near an imitation as possible at the same time, achieving the direction and general contour of the melody without exact matching of notes (Wigram, 2004 p.82) |

| | |
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| Empathetic Improvisation | A musical response directly connected to the client's 'way of being' i.e. taking into account the client's body posture, facial expression, attitude and previous knowledge of their personality and characteristics by playing something to them that reflects a musical interpretation of their own 'way of being' at that moment (Wigram, 2004 p.89) |
| Reflecting (mood and energy) | Playing back to the client in a supportive and empathic confirmation of how they 'present' at the time. 'Matching the moods, attitudes, or feelings exhibited by the client (Bruscia, 1987 p. 540) |
| Exaggerating (mood and energy)(imitation) | Bringing out something that is distinctive or unique about the client's response or behaviour by amplifying it (Rainey Perry, 2008). |
| Structuring Techniques | |
| Grounding | Creating a stable, containing music that can act as an 'anchor' to the client's music e.g. strong octaves or fifths in the bass of the piano; steady pulse beats on bass drum; simple ostinato (Wigram, 2004 p. 91) |
| Rhythmic Grounding (extending and varying interaction) | Keeping a basic beat or providing a rhythmic foundation for the client's improvising (Bruscia, 1987) |
| Tonal Grounding also known as Tonal Centring (extending and varying interaction) | A process where one establishes a tonal bass which acts as a foundation or 'anchor' to the client's music if it is predominantly melodic or harmonic and is wandering around; providing an octave fifth or harmonic chord that is congruent with and tonally grounding for, the client's music (Wigram, 2004) 'providing a tonal centre, scale or harmonic ground as a base for the client's improvising' (Bruscia, 1987, p. 535) |
| Shaping (extending and varying interaction) | Helping the client define the length of a phrase and give it an expressive shape (Rainey Perry, 2008) |
| Holding** | Providing a musical 'anchor' and container for the client's music making, using rhythmic or tonal grounding techniques; Can also include the concept that the technique contains the feelings of the client by 'providing a musical background that resonates the client's feelings while containing them' (Bruscia, 1987, p. 536) |
| Containing | By playing in a structured way which provides a repeated pattern (Wigram, 2004) |
| Techniques of Intimacy | |
| Sharing Instruments (sharing) | Using the same instrument as the client, or |

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| | playing it co-operatively (Rainey Perry, 2008) |
| Bonding*** (musical associations with behaviour) | Developing a musical theme that symbolizes or becomes associated with their relationship (Bruscia, 1987 p. 548) Developing a short piece or song based on the client's responses and using it as a theme for the relationship (Rainey Perry, 2008) |
| Elicitation Techniques | |
| Repeating (extending and varying interaction) | Reiterating the same rhythm, melody, lyric, movement patterns either continuously or intermittently (Rainey Perry, 2008) |
| Modelling (turntaking) | Presenting or demonstrating something for the client to imitate (Bruscia, 1987, p. 535) Playing and demonstrating something in a way that encourages the client to imitate, match or extend some musical ideas (Wigram, 2004 p. 99) |
| Making Spaces (turntaking) | Leaving spaces within the structure of one's own improvisation for the client to interject (Rainey Perry, 2008) |
| Interjecting (turntaking) | Waiting for a space in the client's music to fill in the gap (Rainey Perry, 2008) |
| Redirection Technique | |
| Intensifying (mood and energy) | Increasing the dynamics, tempo, rhythmic tension, and/or melodic tension (Rainey Perry, 2008) |
| Calming (mood and energy) | Reducing or controlling the dynamics, tempo, rhythmic and or melodic tension (Rainey Perry, 2008) |
| Intervening (changing direction) | Interrupting, de-stabilizing, or redirecting fixations, perseverations, or stereotypies of the client (Rainey Perry, 2008) |
| Reacting | After an improvisation or playback, asking the client what he/she liked or disliked about it (Bruscia, 1987, p.535) |
| Dialoguing | |
| Dialoguing | A process where therapist and client/clients communicate through their musical play (Wigram, 2004) |
| Turntaking dialogues | Making music where the therapist or client in a variety of ways, musical or gestural, can cue each other to take turns. Turntaking style of dialogue requires one or other to pause in their playing and give space to each other (Wigram, 2004 p. 98) |
| Completing (turntaking) | Answering or completing the client's musical question or antecedent phrase (Rainey Perry, 2008) |
| Continuous 'free-floating' dialogues | Making music in a continuous musical dialogic exchange – a free-floating |

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|---|--|
| | dialogue. Therapist and client play more or less continuously and simultaneously. Musical ideas and dynamics are heard and responded to, but without pause in the musical process. (Wigram, 2004 p. 98) |
| Musical Cues | Subtle and obvious ways of promoting the initiation, development and progression of a dialogue. Harmonic cues; Rhythmic cues; Melodic cues; Dynamic cues (Wigram, 2004 p. 100) |
| Gestural Cues or Conducting | By indicating a space where a therapist would like a client to start playing (or continue playing) on their own: e.g. taking hands off instrument or 'freezing' at instrument; looking at the client and take hands off instrument; eye referencing; point and indicate whose turn it is to play; use physical prompts (Wigram, 2004 p. 100) |
| Procedural Techniques | |
| Enabling (assisting) | Instructing the client about improvising or otherwise assisting him or her (Rainey Perry, 2008) |
| Pausing | Having the client make 'rests' at various junctures in the improvisation (Bruscia, 1987 p.536) |
| Receding (introducing change) | Taking a less active or controlling role and allowing the client to direct the experience (Rainey Perry, 2008) |
| Shifting (introducing change) | Changing from one modality and/or medium of expression to another (Rainey Perry, 2008) |
| Changing Direction (introducing change) | Initiating new thematic material (e.g. rhythms, melodies, lyrics) and taking the improvisation in a different direction (Rainey Perry, 2008) |
| Modulating (changing direction) | Changing the meter or key of the ongoing improvisation with the client (Rainey Perry, 2008) |
| Accompanying | Providing a rhythmic, harmonic or melodic accompaniment to the client's music that lies dynamically underneath the client's music, giving them the role as a soloist (Wigram, 2004 p. 106) |
| Emotional Exploration Techniques | |
| **Holding | Refer Structuring Techniques above |
| Anchoring | Associating a significant experience in therapy to something that will enable the client to recall it easily, or recasting the experience in a modality, medium or form that will externalize or consolidate it e.g. making a recording, video (Bruscia, 1987 p. 537) |

| Referential Techniques | |
|---|--|
| ***Bonding (musical association with behaviour) | Developing a short piece or song based on the client's responses and using it as a theme for the relationship (Rainey Perry, 2008) |
| Pairing (musical association with behaviour) | The therapist improvises different musical motifs to selected client responses, and then plays the motif every time the client emits the response (Rainey Perry, 2008) |
| Discussion Techniques | |
| Reinforcing | Rewarding the client or withdrawing reinforcement according to the client's behaviour (Bruscia, 1987 p. 537) |
| Probing | Asking questions or making statements to elicit information (Bruscia, 1987 p.556) |

Table 2: Features of Intensive Interaction with Descriptions

Based on Williamson & Barber's (2006) detailed description of the features of Intensive Interaction

| Intensive Interaction Features/Characteristics | Detailed Description/Example |
|---|--|
| Giving good face /sensitivity/ tune in (includes eye gaze/contact) | <i>Showing an awareness of emotionality; responding sensitively to a person; conveying an acceptance, conveying empathy; 'tuning in' to the non-verbal behaviour(gentle) smiling</i> |
| Physical contact/maintaining touch | <i>Physical contact with consent of the person; a physical closeness; staying connected – physically and emotionally</i> |
| Being available | <i>Being available and ready to converse; using your face expressively</i> |
| Physical positioning and proximity | <i>Being respectful and courteous; aware of comfortable and social comfort-zone distances from one person to another</i> |
| Being together | <i>togetherness for the purpose of enjoying each other</i> |
| Imitate (includes copying, repetition, mirroring, matching, synchronizing, shared rhythm, shared tempo) Imitation (modified reflecting back) ... mutuality based on shared timing of movement (Nind & Hewett, 1994 p.7) | <i>Demonstrating shared attention; a shared focus of one person to and with the other person; a sameness; validating and accepting the 'means' of communication; through modification demonstrating an awareness and added interest in the 'topic' chosen; providing another perspective</i> |
| Refer/Echo (reflect) | <i>Making a reference to the 'topic' being communicated; echoing and reflecting as means of affirmation and acknowledgement</i> |
| Turntaking | <i>Mutually agreed (without formalized</i> |

| | |
|--|---|
| | <i>arrangement) sharing of attention (duration, rhythm, tempo, activity) with another person; mutual pleasure</i> |
| Follow persons lead | <i>A willingness to copy and validate a person's reaction or behaviour</i> |
| Taking cues | <i>a willingness to be 'directed' by following signs (facial expressions, gestures, body movements) presented</i> |
| Initiate | <i>offering an 'idea' for another 'topic' of conversation</i> |
| Bursting and Pausing | <i>Demonstrating excitement; enthusiasm; keenness. Providing/allowing designated time to affect a response; interactions flowing in time, with pauses (Nind 1996. p 49)</i> |
| Pauses: Short Pauses and Long Pauses | <i>Short pauses: based on and in time with changes in person's behaviour – generally brief, sharp and dramatic – provides a warm expectancy; Long pauses: waiting and watching to allow the person to process a response and respond by choice</i> |
| Anticipation | <i>An expectation that something will happen; an awaiting with eagerness; waiting in hope</i> |
| Tension and expectancy | <i>An increasing anticipated excitement; a 'controlled' strain with a positive outcome; an organized 'laugh' or joke</i> |
| Chiming in | <i>Affirming and communicating pleasure; a celebratory response – sound (vocal or body percussion) produced and positively celebrated; mutual involvement</i> |
| Sensitivity (on-going theme) | <i>Being sensitively aware of person's disposition and mood; knowing when to 'back-off'; acknowledging 'theme' and regulating according to person's directions and choices; mindfulness of facial expressions and body positions; making micro-adjustments according to achieve optimum levels of attention (and arousal)</i> |
| Extend/teased out/stimuli or options | <i>Extending interpersonal behaviours (gaze, voice, linguistic code, body posture, facial expression) to become engaging and meaningful (Nind, 1996, p. 49)</i> |
| Celebrate/Have Fun/Playfulness (theme) | <i>Creation of mutual pleasure and playfulness; a celebration of the connection(s); enjoying each other's company – mutual</i> |
| Free flowing interactive play | <i>Responses flow in time; 'Che Sera Sera'; participant 'directs' the interaction</i> |
| Intriguing/curiosity | <i>Planned opportunities to develop mystery and surprise</i> |
| Use of Intentionality | <i>Acknowledging 'person first' – using behavioural responses as initiations of</i> |

| | |
|---|---|
| | <i>communication; the acceptance and validation of response regarded as initiation of an interactive response</i> |
| Running Commentary and Use of Spoken Language | <i>Referenced to what is happening; personalised with atmosphere of warm participation; contains pauses and silences sensitively referenced to feedback signals from the person</i> |
| 'Games' | <i>As interactions develop over time they become more frequent, varied and sophisticated – these are the 'games'; the games are spontaneous and responsive</i> |

5.5. Findings Section 1

The initial findings from my music therapy practice reveal that I practise two distinct forms of interactive communication 1) communication which is predominantly musical and 2) communication which predominantly uses other non-musical communication modes. The findings have been grouped under two categories, predominantly musical and predominantly non-musical communication modes. While these two categories are distinct from each other, they can also be linked to each other. They have been presented under the following themes: elements of music and improvisational musical techniques; visual cues; vocal activity; gestures and body language; movement activity and time. These dominant themes contain several codes or sub-themes, some of which overlapped with other themes and contained identifiable features within the two groupings of predominantly musical and non-musical communication modes.

Communication Which is Predominantly Musical

Theme: Elements of Music and Improvisational Music Techniques

My practice which is predominantly musical is facilitated by the elements of music: rhythm or pulse, which includes structured silence and space or time, pitch, tempo, melody, harmony, dynamics and timbre.

Definitions of the Elements of Music used in my practice are as follows:

Rhythm/Pulse - by providing a steady pulse or meter on the drum or playing repetitive progressive chords in the bass on the piano or following the rhythm set up by the children. A consistently steady beat or pulse offered the children stability, direction or intentionality within the musical framework (Wigram, 2008). I was also aware of the importance of **structured silence and space or time** within the predominantly musical area of my practice.

Providing **time, structured within the music and or as space** for a response, became a crucial part of the music therapy process. Wigram, (2004) and Bunt & Hoskyns, (2002) refer to space being an important as sound during music making to provide ample opportunities for interactive and meaningful things to happen.

Pitch – I regularly adapted the pitch of my voice – both singing and spoken, to adjust to the personalized context of each child I often changed from my natural soprano voice to low contralto voice when I was singing with Toby to match the tone and depth of his singing voice. Refer also to **Timbre**.

Tempo – I observed in particular the rhythms of Toby rocking and swaying at the piano and other body language and gestures to dictate the tempo at which I played an instrument. I also used tempo and rhythm to acknowledge bursts of energy or slight agitation from the children as well as bring about calm or a sense of relaxation in the music.

Melody – I used both improvisational repeated simple melodies and familiar melodies of songs, often with personalized lyrics to capture the children’s “‘here and now’ conscious state” of Damasio’s theory of consciousness (Dimitriadis and Smeijsters, 2011 p.113).

Harmony – by finishing phrases on the dominant 5th or using the 7th chord to provide an anticipatory quality to the phrase which provided space and time for an interactive response to occur.

Dynamics – I altered the dynamics to accommodate the needs of each child. For example, when I played the piano to accompany Nigel on the violin I was constantly changing the dynamics to support his exploratory approach as it changed from tentative and cautious to confident and self-assured.

Timbre – I was aware of changing instruments to suit the musical phase or mood that emerged during the music therapy sessions. I used the guitar to enable a more intimate sequence of events to develop. The timbre of the guitar seemed to capture the spirit of the moment and seemed to encourage shared attention/interaction. I was also aware of the quality and timbre of my voice, which is described by Robarts, (2009) as the musical emotional tone in one's voice, not only when I was singing but when I was speaking and laughing. I used voice inflections when I shared in exaggerated vocalisations with Liam and Toby and I was conscious of using a soft-toned resonance, spoken and sung, when I was in close proximity to Liam.

These elements of music, in relation to my practice are intrinsic and fundamental to the delivery of music during music therapy. They are discussed alongside the improvisational techniques. The findings have identified that I use some of the strategies and interventions of the improvisational music techniques of empathy, structuring, intimacy, elicitation, redirection, dialoguing, procedural, referential and discussion, Bruscia (1987). Definitions of these techniques are referred to in Table 1. and are discussed in detail with reference to my practice below.

Theme: Techniques of Empathy Identified in my Practice

During my music therapy practice I have used the empathetic techniques of imitation or copying, synchronizing, incorporating, pacing, matching, mirroring, reflecting and exaggerating. I have also used empathetic improvisation by responding directly to the 'way

the child is' for instance, a facial expression, body posture and/or attitude based on prior knowledge of a child's personality and reflecting that expression back at that moment in a musical interpretation. During session 7 (2/2) with Toby, transcript line 79, through humming (a familiar response to reflect Toby's way of being when he sways) I empathetically connected with him at that moment.

I have used imitation, copying and synchronizing by playing back or singing to the children, as if echoing or reproducing exactly what they have played to validate their response and musically confirm that what is created is acknowledged and accepted. Through synchronizing, which is another way of 'being together' by doing exactly what the child is doing at the same time, I have been able to begin to create a sense of togetherness and familiarity framed within the structure of the music. Refer Toby session 3 (1/2) transcript line 16- line 17, I synchronized with Toby – decreasing the volume of my singing as well as slowing the tempo and pulse with percussive accompaniment on the gathering drum to join in singing with him exactly at that time.

I have used 'incorporating' in the form of imitation to create a shared focus with the children. This is demonstrated by using the same instrument(s) and imitating the pulse and tempo played by the children. By matching the child's mood and energy, also known as pacing, I have captured the energy level (speed and intensity) of the children and reflected this in the musical interactions. Mirroring and at times, close-enough mirroring, has also provided me with an opportunity to do exactly what a child is doing - musically, expressively and through body language. An example is in session 3(1/2) Liam, transcript line 58 to line 64 when I was crouched at Liam's height, I kept in close physical proximity and made eye-contact with him. I used identical instruments (one black egg shaker) listening to him and mirroring his response of a chaotic rhythm, interspersed with a steady pulse, to provide a musical frame in the moment.

Reflecting back to the children their mood, energy and attitude has been an important part of my music therapy practice because it relates to the children's feelings that they have presented during a music therapy session. Reflecting the children's mood and energy in the music creates an invitation for empathy between me and them. It also creates an opportunity to become attuned to the child. Any opportunity for the development of attunement or exchange of affect through a meaningful musical interaction creates an opening for a trusting

and therapeutic relationship. Exaggerating or imitating something that is characterized only by a child's response or in the case of Toby, his excited behaviour (session 7, (2/2), transcript line 17- 18) I exaggerated his distinctive "whi hoo" vocalisation by using the same energy and raised pitch in my voice. I also imitated his physical gesture by bouncing up on the stool in excitement.

Theme: Techniques of Structuring Identified in my Practice

During my music therapy practice I have used grounding or holding to create stability in the music. It also adds a sense of depth to the music when I use octaves, root position, and or chords of 5ths in the bass. During session 4, (1/2), Nigel transcript line 88-90, I use root position chords to provide stability to the improvised melody. Also, when I sing a familiar song and beat a steady pulse on a drum, this also provides stability within the music; refer session 3, (1/2), Toby, transcript line 32. Further, during session 3, Toby, line 67-72 I play an improvised 'theme' or ostinato which is re-introduced as a tonal centre or tonal grounding for Toby's improvising. I also use containing with Toby during session 3, line 79-80 by humming a tune which is familiar to Toby and which helps to calm him when he becomes aroused while improvising at the piano.

Theme: Techniques of Intimacy Identified in my Practice

During my music therapy sessions there are many opportunities for intimacy to develop within the therapeutic relationship. The intimacy associated with sharing of space and sharing of instruments and resources. The music therapy room is a relatively small space. However, it has high ceilings, good ventilation and ample natural light. The very nature of this environment is inviting and provides a safe space for the development of intimacy with the children. When we share and play the piano together, we sit close to one another, when we share a drum, a cymbal, a metalophone we are close proximity to one another. An example of intimacy, as described above, is during session 5, (2/2), Liam, transcript line 22-23 I was crouched on the 'buzzy-bee' cloth beside Liam as I sang "buzz" tracing the outline of the bees on the cloth, as he looked on.

Theme: Techniques of Elicitation Identified in my Practice

I have used elicitation techniques of repeating; modelling; making spaces; and interjecting in my music therapy practice. By repeating the music and returning to familiar songs or ostinatos, rhythms or improvised lyrics gives the children a sense of familiarity and structure within the developing musical relationship. During session 3, (1/2), Toby, transcript line 43-45, I repeated the improvised octave pattern that Toby had played which developed into a turntaking and synchronized phase at the piano. During session 6 (2/2), transcript line 9-10, 17-18, and 46 I (role) modelled behaviour which was congruent with listening and focusing on an activity, by sitting beside Nigel watching and listening to instructions of the on-line tutor on the computer screen. During session 4 (1/2), Nigel transcript line 111-112, I used improvisational modelling by playing in octaves and increasing the volume and tempo to encourage Nigel to extend and deepen his musical exploration on the violin. He responds by imitating this musical expression on the violin.

Making spaces within my improvisational music means to pause, listen and wait for a response from the children. It can also mean that I have left space within the music for a child to interject, when a turntaking phase develops. During session 3, (1/2), Toby, transcript line 56-59, I made space within the song for Toby to sing single words or phrases of the song and he responded by making spaces for me to sing in the gaps – sometimes mouthing the words as he looked at me. Making spaces within the interactive music process is also about the use of structured silence within the music, for example the use of anticipation or anacrusis during session 3(1/2), Toby, transcript line 49-50, I sang at a slowed tempo the first two words of one of Toby's favourite songs "Hot Cross ..." and left a space for him to complete the phrase. Toby paused, smiled at me and began a sweeping glissando pattern on the piano.

Waiting for a space or interjecting in the children's music can also be referred to as turntaking. Turntaking sequences within my practice are at various stages of development with the various children. During session 3 (1/2) Liam, transcript line 63-66 Liam's turntaking awareness is at an emergent stage – he begins to allow me to share the metalophone with him; during session 7 (2/2), Toby, transcript line 5-10 a brief turntaking exchange developed as I responded to Toby's descending 4 note patterns as he paused and waited for my response; and during the same session with Toby at transcript line 27-37 a

further turntaking exchange developed into a musical dialoguing when pausing and gestural cues were used within the musical exchange.

Theme: Redirection Techniques Identified in my Practice

There are four improvisational techniques of redirection; intensifying, calming and intervening and reacting. During a session with Toby I have used the technique of calming to bring about a change of mood and energy during the musical interaction, (session 3 (1/2), transcript line 59-60). I slowed the tempo of the music to match his timing and reflect his changing mood. During session 3, (1/2), Liam, transcript line 42-45, had become fixated on 2 black keys in the lower register of the piano. I intervened by joining him at the piano, at the upper register and playing and singing a familiar song, "Patter Cake" hoping to re-direct his fixation.

Theme: Dialoguing Identified in my Practice

This is a music therapy technique that I have also referred to as 'turntaking' during this research process. I have also referred to 'turntaking' under techniques of elicitation above. It is a process where the children and I communicate through our musical play. We communicate with each other in a variety of ways including musical and gestural. It does, however, require one of us to pause during our playing and give space to the other person. It is therefore, a fundamental skill of communication and can be part of the goals and focus areas of the music therapy programme for them. For example, during session 3 (1/2), Liam transcript line 59-63, Liam reached towards the metalophone and using a beater and an egg shaker he began to tap on the metalophone. We were sitting in close to each other and Liam remained engaged in the musical play with me alongside him. This demonstrated participation with emergent turntaking skills.

During session 4 (1/2), Nigel, transcript line, 103-107 Nigel was playing the violin. We had become 'connected' as I listened to Nigel's musical ideas (pulse, tempo, dynamics and melodic phrase of quaver, quaver, crotchet, crotchet, crotchet) and responded with an imitative phrase, a musical dialogue began to emerge. Also, during this musical phase, at line 108, I introduced an element of change into the musical dialogue by repositioning myself to

the middle register of the piano to provide a richer texture to the music to encourage Nigel to extend his exploration.

I have also used gestural cues and musical cues to indicate a space or turn to play an instrument during my music therapy practice. During session 3 (1/2), Liam, transcript, line 9-10, I reached out to offer Liam two beaters to join me at the gathering drum. He had been glancing between the two beaters placed on the surface of the drum, the beaters that I was using. He chose the beaters on the surface of the drum and became momentarily engaged in this musical activity. During session 5 (2/2), Liam, transcript line 12-15 Liam had been playing the cymbal with an energized action, I had imitated this energy playing on the snare drum. I then slowed the tempo of the drum roll, called “and stop” to cue Liam into a ‘stop’ playing interactive game.

Theme: Procedural Techniques Identified in my Practice

Following analysis of my practice I identified during session 4 (1/2) with Nigel, that my role was primarily to assist him with exploring the violin. I was enabling him to become familiar with the instrument by supporting him to discover comfortable positioning and modelling ways to hold the violin and use the bow. As Nigel’s confidence in his own ability to play the violin increased, I played a less active role during the session, to allow Nigel the freedom to direct his own experience. This kind of procedural technique is referred to as receding. It can also be a way of introducing change into the interactive musical relationship. For example, during session 4 (1/2) transcript, line 84-91 I accompanied his violin playing on the piano by fitting with his style of playing by maintaining his tempo, dynamics and texture. I then began to mirror as near as possible the general contour of his musical phrases punctuated with pauses as Nigel played solo and directed the musical experience. I then introduced sustaining root position chords in the left hand and simple single note melodies in the right hand to support his increasingly adventurous music. During this phase my accompanying role changed from providing full musical support to a minimalist supportive role.

Theme: Emotional Exploration Techniques Identified in my Practice

I have identified that during my practice the emotional exploration techniques of holding and containing have emerged while I have provided octave, root position and fifth chords to

contain or ground the sometimes repetitive music of the children. For example, during session 7 (2/2), Toby, transcript, line 41-42, I played an improvised bass of I-V-IV-V-I with 1st and 2nd inversions in the right hand to match his tempo of the two-finger repetitive chords. I then gradually slowed my tempo and transitioned into one of Toby's favourite songs to contain his music and provide stability and familiarity during the musical interaction.

Theme: Referential Techniques Identified in my Practice

During both music therapy sessions with Toby, pairing and bonding have been identified as improvisation techniques of musical associations with his (physical) behavioural responses. One of his favourite songs emerged as opportunities to associate one of his behaviours with the musical context. During session 7 (2/2) Toby, transcript line 77-80, when I began to play and sing "Row, Row, Row Your Boat" Toby would associate that song with humming and swaying. This had a calming effect on him. I used that song during session 3(1/2) and Toby's responses have been similar. This song therefore provided me with an opportunity to build a rapport and bond with Toby through the music.

Theme: Discussion Techniques Identified in my Practice

During session 4 (1/2), Nigel was exploring a violin and a bow for the first time. My role was to support and encourage his curiosity. As he positioned the violin comfortably on his left shoulder and began to pluck the strings, I offered words of praise as a rewarding strategy to celebrate his success and reinforce or increase his positive response. It was also an opportunity for me to make statements and elicit information (probing) from him. For example, line 96-97, I asked Nigel to show me and name the keys of the piano. This was an opportunity for me to hear about Nigel's musical knowledge and make a diagnostic assessment.

Communication Predominantly Using Other Non-Musical Modes

Theme: Visual Cues

Definition: The way I used my eyes and facial expressions to prompt an interaction and communicate a response during a music therapy session.

During my practice I have engaged in a range of visually interactive responses with the children. I have also used a variety of resources. I have made eye-contact with the children at various levels of intensity to establish communication and encourage an interactive response. I have glanced, made eye-contact – intermittent or sustained, and smiled at the children as a form of mutual regard to offer respect and acknowledge that person's presence. I recognise the importance of making eye-contact because it may lead to a feeling of closeness and acceptance, which I consider are important features of my practice necessary to establish communication.

I have used eye-contact to prompt a response and to validate a response. It provides me with a means to initiate and/or to wait for a child's response, to capture a child's attention during a conversation, to validate a child's response, to offer encouragement to carry out an activity and to gauge a child's level of interest in an activity. Eye-contact provides me with an opportunity to connect in the moment with the children and to respond sympathetically to them.

I have also used eye-contact with an increased level of intensity to consciously and purposefully become connected with the children by moving my gaze between the child and towards and away from an object or instrument to establish a shared focus between us. During session 6(2/2) lines 10-40 with Nigel, I was constantly moving my gaze between him the computer screen and the violin to establish a shared focus between us and model appropriate listening behaviour.

The sharing of an object, for example, looking at a computer screen or playing an instrument co-operatively for example during session 7, (2/2) lines 2-10 Toby sat at the piano, I sat beside him. With shared visual attention we played the piano co-operatively and a turntaking exchange developed. These shared experiences present as opportunities to develop and foster intimacy within the music therapy relationship. When I have established shared visual attention with a child and we are focused on an object or instrument the child is able to participate in a shared experience which focuses on the child's music therapy goals.

In my practice I have used eye-contact and a range of facial expressions to communicate empathy with the children. Eye-contact and facial expressions are intrinsically linked modes of fundamental communication. During my practice I have observed the following facial

expressions that I have used to communicate my sensitivity towards and celebratory responses with the children. I have smiled, for example session 4 (1/2) Nigel, transcript line 32-32, to offer encouragement as Nigel explored sounds on the violin; I have grinned, and I have laughed and expressed animation and excitement. With a genuine solemn and sincere facial expression I have also communicated a sense of understanding and recognition of the emotional state of the child at the time of the music therapy session. Eye-contact and facial expressions provide me with modes of communication to express emotionally charged responses (for example laughter, excitement and surprise) by reflecting each child's mood and energy. During session 4 (1/2) Nigel, transcript line 48, I laughed and smiled in response to Nigel's request for a violin to be donated to him! I am therefore better able to connect with a child's way of being and regulate the pace and the flow of the music therapy session.

Theme: Vocal Activity

Definition: Any expression of sound from my voice including vocalisations and verbalisations used alongside facial expressions to attract attention and provoke emotional response¹.

In this study I have identified vocalisations as a significant part of my music therapy practice. The theme of vocalisations, to communicate with vocalised sound and promote a vocally interactive exchange with the children is embedded in the facial expression. Vocal communication is offered in conjunction with facial expression. The timbre of my voice is unique to me and reflects my personality and communicates emotion. Its distinct tone adds meaning to sounds and I have used it to help create the atmosphere and mood during the music therapy sessions. I have also used it to emphasise musical ideas and exaggerate expressions of sound with the children. During session 4 (1/2), with Nigel, lines 38-39, I vocalise to imitate and exaggerate the octave interval he had just played on the violin to acknowledge that I was listening to him and to create a sense of fun at that time.

My voice is a 'tool' to communicate my expressions with the children. The vocalisations include verbal dialogue with them to share information and communicate empathy. During session 4 (1/2), transcript line 43 to 51, I looked at Nigel with an encouraging smile and

¹ It can be hard to distinguish sound, or spoken words, from music or singing. I have had to make an arbitrary distinction between what seems to be music and what is predominantly a 'non-musical mode' of communicating.

celebrated his achievement saying “that’s great”. The tone, pitch, volume and tempo of my vocal communication have been in response to the child’s facial expression, general disposition and emotional behaviour. Further, I provided an explanation which was framed with a smile and a hint of laughter in response to his comment wishing for a violin to be donated to him. The combination of heartening dialogue, positive facial expression and laughter provided a sense of mutual pleasure and connectedness during this interaction.

I have also used singing and exaggerated vowel and speech rhythms to communicate with the children. During session 3 (1/2) with Liam, transcript lines 55-56, I vocalised with animated tone and exaggerated vowel sounds of “oo” and “ah” as Liam selected various percussion instruments from the basket. During session 5 (2/2) also with Liam, lines 36-39, I sang exaggerated vowel sound of his name while he was exploring the frets and strings of the guitar.

Vocalisations combined with gestures in my practice have provided a visual means to communicate and demonstrate the use of an object or instrument. They have become a physical prompt to support and encourage a new experience. I have used gestures combined with vocal expression as a spontaneous response to a shared musical experience. During session 4 (1/2), transcript lines 55-56, I spontaneously extended my arms and hands out, with palms facing upwards, as I commented to Nigel, offering verbal encouragement and celebrating his musical achievement.

I have used vocalisations in response to vocalised or percussive sounds of the children by copying, imitating or mirroring their sounds as a method of acknowledging, accepting and validating their responses. A vocal and rhythmic exchange between me and the children began to emerge as I used these techniques of interactive communication. In session 3 (1/2), transcript line 44-45, with a softening of my voice and increased animation in its tone and pitch, I repeated “birdie” back to Liam to reflect and validate his vocalisation.

By being aware of the tempo, pitch, volume and intonation of my vocal communication and changing it to suit the different emotional context of each music therapy session I reflect each child’s mood and energy in a sensitive and musical way. During session 5 (2/2), transcript line 42-44, as I was playing the guitar, Liam was exploring the strings, he appeared to become sleepy, and began rubbing his eyes. I continued playing, slowed the tempo, decreased the volume of the guitar and my singing, and extended the vowel sounds within the

improvised melody. This seemed an appropriate person-centred response to Liam's apparent sleepy disposition.

Theme: Gestures and Body Language

Definition: Any type of expressive movement of the body or parts of the body, including facial expression to enhance communication

I have used gestures and body language in my music therapy practice to enhance communication during music therapy sessions. In most instances my gestures have been spontaneous and have corresponded with the mood and energy of the child during the music therapy context. During my practice I used body language consciously and at times unconsciously, as part of offering a welcoming, accepting and relaxed feel to the therapeutic relationship. My body language has been a mode of communication to facilitate the development of the interactive relationship between myself and the children.

I have used gestures, framed with facial expressions to attract or capture a child's attention to assist them with focusing on an object or instrument. This is a strategy I have used with children to enable progression towards the development of shared visual attention. I have used gestures to provide a physical cue to invite a child to 'have a turn' or 'join me'. During session 3 (1/2) with Toby, transcript line 37, I offered an open-hand gesture towards Toby, signalling, and with my eyes looking towards the drum. I have also used gestures combined with voice, as a physical prompt to intervene in fixated or obsessive behaviour. During session 5 (2/2) with Liam, transcript, line 65, I reached out and gently touched Liam on the shoulder to intervene in his obsessive behaviour and offer him reassurance and an alternative musical activity.

Physical gestures have been used to demonstrate or model to a child a physical action required to play an instrument. They offer a visual option to help increase success and to obtain a sense of achievement for them. During session 4 (1/2), transcript line 5, I demonstrated to Nigel the sweeping movements necessary to play the violin. He then copied the movements with what appeared to be apparent ease.

I have used physical gestures in my music therapy to emphasize and/or exaggerate a vocal comment of encouragement. Session 4 (1/2) with Nigel, transcript lines 101-102, I opened

my arms and used open-palms facing upwards and moved them in time with the important words that I stressed to Nigel.

I have used physical gesture to copy, imitate, match or respond playfully to a child's behaviour. I have responded this way to communicate a 'togetherness' and establish a visually recognizable bond between us. We become 'a pair' and there is a 'sameness' which can develop into synchronized play.

Theme: Movement Activity

Definition: any type of activity that includes physical action and motion including positioning and proximity during a music therapy session

Positioning and proximity is about recognising where my physical presence is situated in relation to the child's position during a music therapy session. It is about managing physical space between two people in a respectful and unthreatening way.

The theme of positioning and proximity overlaps with the theme of gestures and body language because of its association with movement. During session 4 (1/2), transcript line 30 I 'stood back' from Nigel to allow increased physical space between us and to acknowledge that there was both physical and musical space to enable him to express himself creatively.

The transcripts of my music therapy practice reveal that I am constantly aware of my positioning and personal comfort zone in relation to the children. I am aware that in the privacy of the music therapy environment both the child's and my personal safety are important. I have provided a 'comfortable' and manageable space between myself and the children to enable access to shared instruments or to demonstrate how to play for example, the violin. A physical closeness or manageable distance between me and a child can be an indication of the stage of development of trust within the therapeutic relationship.

I am constantly aware of positioning myself comfortably and safely to be physically available for the children. I am conscious of my height being at the same level as each child and adjusting it according to the context. During session 3 (1/2) with Liam, transcript line 1, I was kneeling behind the gathering drum to provide a comfortable distance between us and provide a visibly accessible opportunity for him to join me. An instrument can be both a

bridge between and connecting us or in some instances it can be a physical barrier which provides a manageable distancing strategy for children.

During my music therapy practice I am regularly positioned in close proximity to the children. For example, during session 6 (2/2), transcript lines 9-10 Nigel and I were sitting together, sharing a piano stool while looking at a computer screen; during session 3 (1/2) line 5, with Toby I sat on the piano stool which was closely positioned opposite him. The sharing of resources requires a degree of closeness to each another.

Physical closeness requires a level of tolerance and trust from the child's perspective which may progress towards the development of intimacy in a therapeutic relationship. By placing myself alongside the children I provide an opportunity for an exchange of affect to develop – through the physical closeness and the development of the musical interaction. An exchange of feelings, or emotional engagement, may emerge between us which is then reflected in the improvisational music.

I have also noted that during my practice unobstructed visual access to the children is a consideration and therefore positioning and proximity to each child is important. When, for example Nigel during session 4 (1/2) was standing and playing the violin and I was accompanying him at the piano – unobstructed visual access to him was important for me to time musical entries, and monitor his facial expressions to gain a sense of his progress and enjoyment throughout the musical interaction.

Theme: Providing space in the music

Definition: To provide time during my music therapy practice is to be consciously aware of pausing, waiting, and listening to the child. It is about the need for structured silence during a music therapy session

During my music therapy practice I have “paused to listen; waited and listened” (Nigel, session 4 (1/2), transcript, lines 61 and 99) to provide time and a sense of increased space for Nigel as he explored playing the violin for the first time. By pausing to listen to him I offered acceptance, valued his creative response and provided him with opportunities to be ‘in control’ of this time and musical space.

By allowing time and creating space to listen, I provide opportunities for the children to respond in their time. It enables them to process the creative opportunities that emerge during the interactions between us. It gives the children a sense of self and also a sense of another person in a therapeutic relationship. It also creates an opportunity for connecting moments to happen between myself and the children during the music therapy sessions.

I have also recognised the importance of creating pauses during ‘the looking’ or visual communication, when I have encountered close proximity to the children during the music therapy sessions for example, Liam, session 5 (2/2) transcript lines 2-3, 16-17, 30, 35-36 and 39. By providing pauses or time during the visual communication this helps to avoid feelings of intimidation or awkwardness for the clients.

I have used the technique of structured time or structured silence in the form of anticipation or anacrusis (*part of the first beat at which a piece of music begins*) at for example, Toby, session 5 (1/2), transcript line 60. This is an opportunity for Toby to respond and interact with me through the music and to foster and develop joint attention and communication in a therapeutic setting. Structured time is also referred to in Communication which is Predominantly Musical at 5.5.1 at Definitions of the Elements of Music.

5.6. Findings Section 2

Features of Intensive Interaction Identified in my Music Therapy Practice:

The findings identify that my music therapy practice is about communicating with the children to actively engage them in a therapeutic relationship through music. During this engaging process the findings show that patterns and correlations have emerged from my practice which contains some features of intensive interaction. These patterns and correlations have commonalities with the predominantly musical communication modes of the improvisational techniques I used. Features of intensive interaction also appear to be common in the non-musical communication modes of my practice. Intensive interaction is about establishing communication through a naturalistic language intervention of ordinary communication between two people. It is a person-centred approach and is generally guided by a practitioner whose purpose it is to intimately connect and interact with another person in the moment. Intensive interaction is used to teach and spend quality one on one time with people with learning difficulties, communication challenges and distressed behaviour.

Improvisational music therapy is also about establishing communication through music creatively in the moment, by responding to the environment or the person in a person-centred reflective way.

A schedule of intensive interaction features with descriptions is contained in Table 2. I have compared my music therapy practice, both musical and non-musical with the features identified in this schedule. For example, a feature of intensive interaction known as 'giving good face' is about showing an awareness of a person's emotionality by responding sensitively to them. It is about 'tuning in' to the non-verbal behaviour of a person and conveying empathy with your face. Throughout my music therapy practice themes of empathy have emerged. During session 5 Liam 2/2 line 168 XL document, Liam was exploring the metal rim of the snare drum with his mouth. While he was mouthing the metal rim, I sat close to him and I looked on with a gentle smile. I also accompanied him on the guitar with empathetic improvisation by pacing and reflecting his exploratory actions at that moment in the music with a three meter pulse and slow tempo of gentle strumming through the primary chords of A major. It seemed as though I was 'giving good face' to Liam at that moment by accepting and responding to his non-verbal behaviour of curiosity through the improvisational techniques of the music framed with a gentle smiling facial expression. 'Giving good face' also refers to eye-gaze and eye contact with another person. I made eye-contact with Liam as I smiled at him. It establishes an intimacy between one another with a constant awareness of pausing 'in the looking' so as not to create a threatening situation. Also, at that time I was aware of and recognized the need for a non-threatening and supportive distance between Liam and myself. This distancing from or allowance for increased physical space between myself and the children is referred to in the narrative transcript, Liam, session 5 (2/2) transcript lines 2-3, 16-17, 30, 35-36 and 39 within the non-music communication mode findings coded as 'physical positioning'. It is also referred to in session 4, Nigel (1/2) , transcript lines 2, 72 -73, 78-79, 96 and 98 under the non-music communication mode findings as a consideration of the socially acceptable and comfortable physical space between Nigel and myself - while he was embarking on his first experience of using a violin and bow. It was also a consideration during session 6 Nigel, (2/2) transcript lines 7-10, while I was either sitting close to Nigel on a shared piano stool during the viewing of a computer screen watching the on-line tutor, lessons 1-3 of learning to play the violin, or standing to demonstrate the body positioning of the violin and securing the bow. Similarly, this action of non-music communication is referred to as 'physical positioning and proximity'

within the schedule of features of Intensive Interaction at figure ii. Physical positioning and proximity within an Intensive Interaction context is about being respectful and courteous to your partner by being aware of the socially acceptable and comfortable distance between one another. Further, Intensive Interaction also refers to 'physical contact', 'maintaining touch' and 'staying connected' with your partner physically and emotionally during a 'conversation'. During session 5, Liam, (2/2) transcript lines 64-65 I reached out and gently touched Liam on his shoulder to distract him from his fixated behaviour by offering him another musical option. This was clearly an act of physical contact by me carried out in a respectful manner. Again, physical contact was used when I demonstrated to Nigel, session 4 (1/2) transcript lines 21-28 how to hold a violin and a bow by using hand over hand modelling. 'Staying connected' refers to both physical and emotional connections. Additionally, during session 4, Nigel (1/2) transcript lines 48-49 we shared an emotional connection through laughter and smiling at each other as I sensed his humour about wanting a donated violin, from his facial expression and body language. Intensive Interaction descriptors also refer to 'chiming in', 'celebrating', 'having fun', and 'playfulness' as being associated with having an emotional connection with a person. During session 7, Toby (2/2) transcript lines 14-19, I had responded to Toby's earlier musical phase by crashing full-hand clusters chaotically on the keyboard, Toby vocalised "whi-hoo", laughed and bounced excitedly on the piano stool. I laughed and echoed his vocalisation affirming and communicating enjoyment in each other's company. During that interactive moment there was a sense of togetherness. 'Being together' or 'togetherness for the purpose of enjoying each other' is also a feature of Intensive Interaction.

I have identified further interventions or strategies of interactive communication within my practice that is similar to the features of Intensive Interaction. I have identified the improvisational techniques of imitation or copying, incorporating and exaggerating as similar features of Intensive Interaction. For example, during session 3, Toby (1/2), XL document line 120, Toby used his full open-hand to rub the surface of the drum we were sharing, I copied him following his controlled circular action; line 220, Toby was playing the upper register of the piano, using index fingers to play a repetitive alternating pattern of B and D, I joined him playing an octave D repeated pattern and then progressed to a descending octave pattern, incorporating in the music his repetitive alternating pattern by elaborating on it during our musical interaction; at lines 206 and 213, I echoed his vocalised expressions, distinctive to his behaviour, in an exaggerated way in response to Toby's excitement. I

smiled at Toby as I used increased dynamics and changed the pitch in my voice to a descending tone. Under the descriptors of intensive interaction, to 'imitate' or use imitation which includes copying and repetition, these techniques are interpreted as opportunities to demonstrate a shared focus with one person, to and validate and accept the response as meaningful communication. By copying, incorporating and exaggerating Toby's response these aspects of intensive interaction were identifiable in our musical interaction.

The features of mirroring and matching appear to be similar in both disciplines. During session 5, Liam (2/2) transcript lines 10-14, Liam played the cymbal with a sudden burst of energy, I played the snare drum, matching and mirroring his energy and mood to demonstrate an awareness of his creativity. I also used the opportunity to burst and pause and create tension and expectancy and a sense of anticipation by slowing the drum roll and pausing before I called "and ... stop!"

During session, 7 Toby XL document lines 128 -135 Toby was sitting at the piano and made a gesture of a rowing action. We had just completed a turntaking and free-flowing dialogue phase. I then copied his physical action and began to play on the piano a rocking melody to synchronise with his action, rhythm and tempo leading in with the melody accompaniment and singing of "Row, Row, Row, Your Boat" with him. Synchronizing and experiencing a shared rhythm and shared tempo are features of Intensive Interaction. I demonstrated an awareness of Toby's physical action and responded to it in a way that was recognizable and person-centred to him. I followed his lead and validated his behaviour through the musical interaction using a physical gesture, my voice and the elements of music. I therefore took heed of his physical cue, and followed his lead which I then extended into a musical interaction which then became engaging and meaningful to him.

Turntaking is a feature of communication which is common to both my music therapy practice and intensive interaction interventions. It is used in similar ways by both disciplines. The parties mutually agree, without any formalized arrangement, to share each other's attention through duration, rhythm and tempo of the 'act' in an unconditional way. During session 7 (2/2) Toby, transcript lines 4-15 at the piano, a turntaking exchange developed from me initiating a musical idea, pausing for Toby's response which was then responded to by Toby playing middle C in a detached manner and I then responded with a pattern of 4 notes in a detached and dotted rhythm, Toby then responded and extended the exchange using full-hand quaver/crotchet rhythm. This turntaking exchange ended with laughter as we both

celebrated the spontaneity and the reciprocal sharing that had emerged. Turntaking, during an intensive interaction ‘conversation’ is also about mutual pleasure during an interactive exchange. Turntaking can also include the opportunity to initiate or model an idea or physical action which creates an opportunity for another ‘topic’ of conversation or musical exchange to develop. During session 4 (1/2) with Nigel I modelled for him how to hold a violin and bow; again during session 6 (2/2) with Nigel I modelled a particular form of behaviour as we sat together on a piano stool watching the on-line tutor demonstrate how to play a violin. Further, a form of musical modelling occurred when during session 4 (1/2) I encouraged Nigel to extend and deepen his musical exploration by playing in octaves and increasing the volume and tempo of the piano accompaniment, offering him an ‘idea’ to develop his musical creativity into free-flowing interactive play as his confidence in his own musical ability strengthened. To initiate or model an idea during an Intensive Interaction conversation and an improvisational musical exchange is to provide another topic for interactive communication. To change key during a musical exchange is to offer ‘an idea’ or perhaps create a sense of intrigue or curiosity during that exchange. During session 5, (1/2), Liam transcript line 55, Liam had been exploring the drum, I was playing spontaneous improvised music in A major, on the guitar, he then moved to explore the snare drum. I then changed key to G major to create a sense of difference and provide a sense of mystery to the music. ‘Curiosity’ is considered an intervention during an intensive interaction ‘conversation’ to develop mystery and surprise during an interactive exchange.

I have used spoken language at various times during all six of the music therapy sessions that have been included in this research project. During both sessions (session 4 and session 6) with Nigel there was a significant amount of spoken language or dialogue used as Nigel embarked on his chosen ‘topic’ to learn the fundamental skills of holding a violin and manipulating the bow and additionally, viewing and responding to the on-line tutor’s instructions as the lessons unfolded. I also used spoken language with Nigel to encourage, affirm and communicate celebratory responses as he achieved musical milestones during the interactive musical exchange. Spoken language is used during intensive interaction ‘conversations’ by the practitioner often to comment or to make reference to what is happening to help personalize the context. It may contain pauses and silences to provide a warm expectancy and provides an opportunity for the child to process a response. I have used pauses, wait time, and silences during my music therapy sessions. During session 7 (2/2), Toby I used pauses and wait time predominantly during the turntaking exchanges, and during session 5 (2/2), Liam lines 15-16 I used structured silence as I waited in anticipation,

using the musical expression of an anacrusis, for Liam to vocalise “op” after a crescendo (*gradually getting louder*) drum roll.

The use of intentionality is fundamental to my music therapy practice because it acknowledges my child-centred holistic approach. The use of intentionality, during an intensive interaction ‘conversation’ is to acknowledge the ‘person first’ by using the behavioural responses of that person as initiations of communication. During session 5 (2/2) Liam, transcript lines 55-58 as Liam used initiation to explore the wing-nuts on the cymbal frame, I monitored his initiation and fine-motor skill of unscrewing the wing-nuts, making a reference to that in an improvised song, before attempting to re-direct his attention to the basket of instruments

5.7. Findings Section 3

The Relationship between my Music Therapy Practice and Intensive Interaction:

The findings have identified that:

- my music therapy sessions have two relatively distinct forms of interactive communication and
- there is a relationship between my music therapy practice and the concepts used in Intensive Interaction
- that both my music therapy practice and Intensive Interaction share common elements of music (for example shared tempo, shared rhythm)
- that both forms of interactive communication share the developmental theory of human intersubjectivity – that an innate musicality resides in all of us (Stern, 1985; Trevarthen and Malloch, 2000 and Robarts, 2009)
- that I also use a combination of the elements of music and complex musical structures including harmony melody and form within the music itself to convey emotion and feeling
- that through the use of improvisational musical techniques, for example synchronizing, I convey empathy and sensitivity to a client; Intensive Interaction is also a communication model to convey empathy and show an awareness of emotionality to a communication partner

- the balance of the relationship between my music therapy practice and Intensive Interaction is relative to the context and the each child's needs
- the relationship between my music therapy practice and the concepts used Intensive Interaction is a 'fluctuating' relationship within an improvisational musical framework.

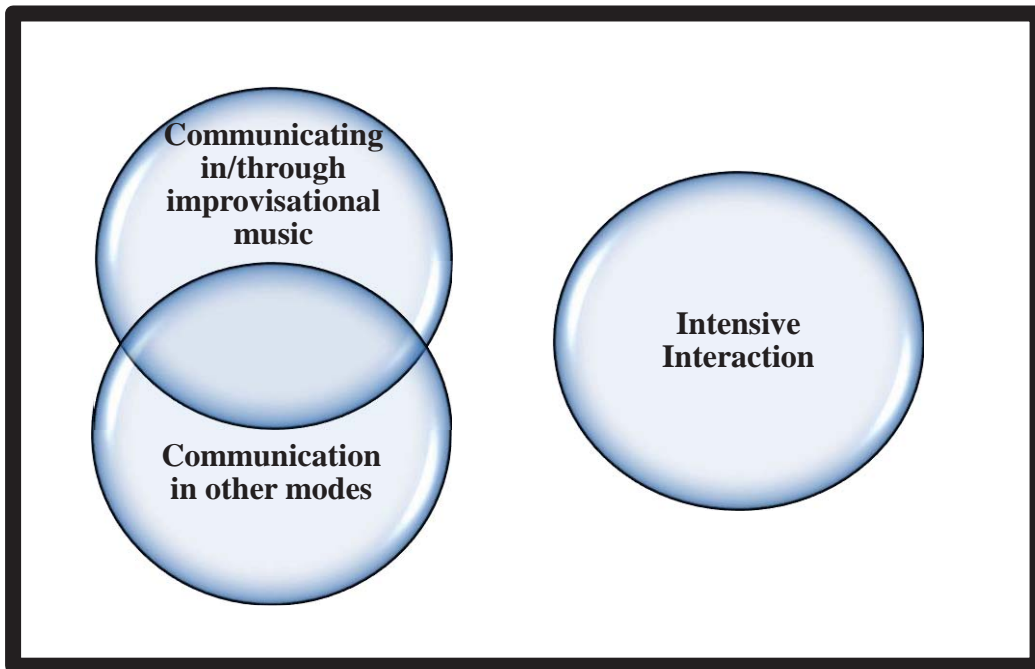
Please refer to Figure (ii). following on page 62. This illustrates the relationship described above.

There is a relationship between Intensive Interaction and my music therapy practice recognizable in both the musical and non-musical modes of communication. Intensive Interaction is a fundamental communication tool to assist a person, generally a skilled practitioner, to interact with another person who may have learning difficulties, communication challenges and exhibit distressed behaviour. As a student music therapist I too have specialised skills in the discipline of music therapy to interact with another person who exhibits similar communication challenges. Additionally, I am also an experienced Intensive Interaction practitioner. Both approaches require a certain skill base and a flexible range of behaviour to facilitate and carry through the communication strategies or techniques related to each approach.

My music therapy practices interface with fundamental communication channels or modes of sound, vision, physical contact or sensory exploration and movement. These communication channels are framed in the creative music experience within the musically interactive therapeutic relationship. They have been discussed and referred to within the six coded themes of the elements of music and improvisational musical techniques, visual cues, vocal activity, movement activity and gestures and body language. I have also included providing space in the music in the list of themes. Providing space refers to pausing, listening and waiting within and during a musical interaction. These themes are recognisable within Intensive Interaction 'conversations'.

Figure (i)

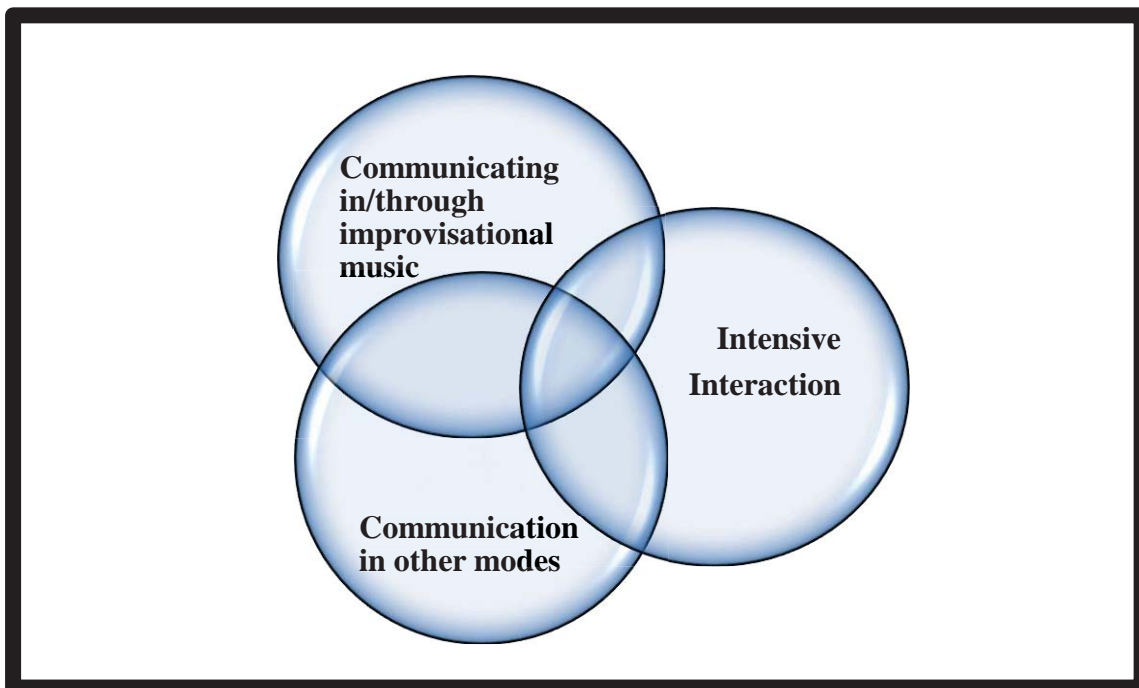
Music Therapy sessions reveal two forms of Interactive Communication



My music therapy sessions have two reasonably distinct forms of interactive communication: 1) communication which is predominantly musical and 2) communication which predominantly uses other modes.

Figure (ii)

The Relationship between my Music Therapy sessions and Intensive Interaction



My music therapy sessions seem to be related to the concepts used in Intensive Interaction. Intensive Interaction seems to be related to both forms of interactive communication, that is communicating in/through improvisational music and communication in other modes by fluctuating between both relative to the context and the child's needs.

The findings suggest that my music therapy sessions have two distinct forms of interactive communication 1) communication which is predominantly musical and 2) communication which predominantly uses other modes of communication. The group of interactive communication identified in the findings as predominantly musical, refer to the elements of music: rhythm or pulse, which includes structured silence, pitch, tempo, melody, harmony, timbre, volume and dynamics: and improvisational techniques. Intensive Interaction also uses elements of music with particular reference to rhythm or pulse, tempo, pitch (of voice) and volume. The use of pausing, both in the visual communication or 'the looking' and in the music, described as wait time or structured silence is also common to both approaches. The findings however reveal that there is one significant difference between Intensive Interaction and my music therapy practice – that while each model uses the elements of music; my music therapy practice combines the elements of music at a more sophisticated, complex and technical level within the framework of the music. For example, the structure of the music which includes the subtlety of phrasing, musical form, melody, harmonics, texture, rhythm and space or timing.

The relationship between my music therapy practice, which is facilitated by musical improvisational techniques, and the concepts used in Intensive Interaction also share some commonalities. The techniques of empathy which include imitation or copying, repetition, mirroring, matching, synchronizing and reflecting are common to both approaches. The improvisation techniques of sharing and assisting through sharing of instruments or in the case of Intensive Interaction, the sharing of an object during a 'conversation' is also common to both approaches.

Within my music therapy practice, interactive communication which predominantly uses non-musical modes or channels of communication aligns with the fundamentals of communication. Intensive Interaction also aligns with the fundamentals of communication, for example, eye-contact and facial expression, proximity and sharing personal space, sharing

attention with another person. These are described as themes in my practice as visual cues, vocal activity, movement activity, gestures and body language and time. Both disciplines use spoken language, although during an Intensive Interaction ‘conversation’ the focus is on both people trying to find common ways of communicating that does not necessarily involve spoken language. It can be used to make reference to what is happening and personalise the context – just as I used spoken language during the music therapy session with Nigel when he first encountered the violin.

The findings have identified that the relationship between my music therapy practice and the concepts used in Intensive Interaction appears to vary according to the context and the needs of the children. For example, during both music sessions with Liam, aged 3 years, (who was always ‘busy’ exploring the instruments with fleeting moments of engagement), I used the elements of music, pulse and rhythm, when beating on a drum, as simplistic musical interventions, to interact with him. This was in contrast to the musical improvisational techniques of matching, mirroring and progressive chord structures used at the piano, to excite and energize the music and secure the attention of Toby and Nigel during their individual sessions. It appears that the amount of directive behaviour from a practitioner during an Intensive Interaction ‘conversation’ also changes to accommodate the personal needs of the child. In the findings, this level of intensity within the musical relationship is dependent upon me being aware of the person’s disposition and mood during the musical event. It is about adjusting my interpersonal and musical behaviours to make the interaction more interesting.

The findings therefore suggest that the relationship between my music therapy practice and Intensive Interaction is interrelated through an awareness of the level of intensity during the (musical) interaction, consciousness of sensitivity towards the other person, and a readiness to reciprocate with that person through the interactive musical event.

Essentially, there are five main characteristics that are common to my music therapy practice and the concepts used in Intensive Interaction:

- 1) That I am striving to create a mutual pleasure and attunement within the musically framed context. That the essence of the interaction is to create a sense of togetherness that recognizes a person-centred and holistic approach and values the importance of

the human connection within the therapeutic relationship (Stern, 1985; Trevarthen and Malloch, 2000).

- 2) That during my role as student music therapist I am continually adjusting my interpersonal behaviours e.g. eye gaze, voice, body posture, facial expression and my musical creativity in the moment (within the framework of improvisational techniques) to become more engaging and receptive to the child.
- 3) That there is a creative freedom within the musical interactions that synchronizes and flows between myself and the children with lots of pauses and structured silence to allow creativity to flourish and communication to develop.
- 4) That intentionality is fundamental to the communicative behaviour or response of the children. However a child responds during a session it is accepted and validated within the musical interaction.
- 5) That I practice contingent responding by following the children's lead and sharing in the direction of the musical interaction or 'theme' with an on-going sensitivity to monitor their disposition and mood.

6. Discussion

6.1. Research Question

What is the relationship between the Intensive Interaction model of communication and a student music therapist's practice at a music therapy centre for children and young people with special needs?

The findings suggest that there are many elements of my music therapy practice that align with the features of Intensive Interaction. They also identify that there are some differences between the two models. From the findings it would seem that while my music therapy practice is predominantly musical it also includes non-musical modes or channels of communication. As my music therapy practice developed I noticed that the non-musical modes of communication became less dominant and the musical modes increased. I also found that the strategies or interventions used were subject to flexibility and dependant on the needs, personal goals or focus areas, of the children, and the context of the music therapy session. For example, Nigel, session 4, (1/2), when he was exploring the violin for the first time – I stood in close proximity to him, used hand-over-hand demonstration and regularly commented on his achievements. As Nigel's confidence in his own ability to feel comfortable with the violin increased, I was able to 'leave' him to his own creative devices and support him through improvisational music at the piano. During the analysed segment of that session, I predominantly used non-musical modes of communication (eye-contact, facial expression, gestures) to support and enhance the interaction between us by varying my levels of intensity. In contrast, Toby session 3, (1/2), sat at the piano with me and directed the communication between us primarily through the elements of music (tempo, pulse, rhythm, volume). The interaction between us was equally reciprocal and through the improvisational technique of empathy, I synchronized with him as we 'acted together' in the music (Bruscia, 1998; Wigram, 2004; Nind & Hewett, 1994).

My music therapy practice draws on the elements of music: rhythm or pulse, which includes structured silence and space or time, pitch, tempo, melody, harmony, dynamics and timbre. Intensive Interaction also uses the elements of music with particular reference to rhythm, tempo, silence, pitch and volume. These musical elements are exemplified through the use of pauses, shared rhythms and shared tempos by the practitioner 'tuning-in' to the non-verbal

behaviour of the learner to negotiate his or her presence and the activity (Nind, 1996). It is these fundamental elements of music embedded within my music therapy practice that share commonalities with the 'musical' features of Intensive Interaction. Rainey Perry, (2008) and Finter, (2008) also refer to the use of musical elements to assist in addressing the needs of individuals within a therapeutic relationship. While the approach of Intensive Interaction uses the fundamental elements of music it does not combine them with the complexity, the subtleties and the sophistication that a music therapist does during the music therapy process. For instance, the subtlety of pacing is used to increase comfort, to establish rapport, or to promote self-awareness (Bruscia, 1987). Further, by providing space within the phrasing and timing of the structure of the improvisation for the client to respond is also considered a subtlety within the musical structure. Music therapy, in addition to using the basic elements of music, combines these elements through complex musical structure, form, melody, harmony and textures to provide the sophisticated 'vessel' through which 'living music' is freely created Nordoff, (1998, cited in Robbins & Robbins, 1998), during the musical therapeutic relationship.

Rainey Perry, (2008) and Finter, (2008) referred to the features of Bruscia's, (1987) and Wigram's, (2004) improvisational musical techniques as having parallels to the features of Intensive Interaction. My findings identify that the improvisational techniques I have used in my practice also align with the features of Intensive Interaction. The theme of empathy is common to improvisational music therapy and Intensive Interaction. It is about a sense of intimacy which is conveyed through the interventions of imitation and reflection which both models share. Interaction, represented through imitation and reflection seems to be the dominant commonality because they have potential to connect through each other's feelings without the necessity of rhythms and melodies (Alvin, 1966). However, Pavlicevic, (2000) refers to this as being the purpose of improvisational music therapy which is to "create an interpersonal relationship between therapist and client, through the musical event" p. 272) and take each other into account as a person. Barber, (2005 cited in Finter, 2008) and Nind & Hewett, (1996) confirm this as use of intentionality by acknowledging the 'person first' through acceptance and validation as an initiation of an interactive response.

Both models share the same fundamental theories of Stern, (1985) which replicate the naturalistic and responsive processes of infant caregiver information and are primarily focused on establishing communicative responses in a trusting and empathetic relationship (

Trevarthen & Malloch, 2000). The data from which this research was generated involved individual one on one music therapy sessions in a designated space at regular weekly intervals using instruments. According to Hewett, (2012) Intensive Interaction ‘conversations’ may occur anywhere and at any time and objects are seldom used during a ‘conversation’, unless the participant has chosen to bring/share an object to the ‘conversation’. Further, both models use non-musical modes of communication: visual cues, vocal activity; movement activity; gestures and body language and time and space. While Intensive Interaction incorporates vocalisations and vocal sounds as stimuli or opportunities to extend or to create tension and expectancy, intrigue or curiosity it does not use singing or songs as a source of interaction. As a student music therapist I incorporate singing (familiar or favourite, structured or improvised songs) into my sessions as a personalized expression to connect and communicate with the children. These songs often contain delicate interplays of phrasing and timing to provide space in the music and a sense of familiarity and emotional investment in the therapeutic relationship (Powers & Trevarthen, 2009).

6.2. Reflections on the Research Process

The initial challenge I faced during this research process was the challenge of never being able to completely leave to one side, my past experiences as an Intensive Interaction practitioner. I found it challenging to eliminate past experiences from my mind and any preconceived ideas I had about what I thought was the relationship between my music therapy practices and Intensive Interaction. Wheeler, (2005) refers to a way of overcoming this challenge, by being “encouraged to clarify the ontological and epistemological underpinnings of the study” (p. 101). After clarifying my ontological and epistemological background and re-focusing my thinking from a student music therapist’s perspective, to become the priority during the research process and making a decision to apply a theoretical research approach (Bruscia, 2005) to look at the explicit patterns that underpin my practice, I was then able to use that decision to develop the topic and design the research project (Wheeler, 2005).

When transcribing the video observations, writing the narrative transcriptions, coding the themes and developing the excel sheets to analyse the patterns within the findings, it soon became apparent that the codes or terminology that transpired from the inductive process were already part of my vocabulary. There was an additional challenge that before I drew up

the documentation to illustrate the findings and began the writing process, I had previously familiarized myself with the literature for both disciplines and therefore the techniques and interventions for improvisational music therapy and Intensive Interaction were in my mind as I analysed the work.

As a music therapy student involved in this project from a secondary analysis methodology, it was both challenging and rewarding to be constantly reviewing my practice and making adjustments to it as I 'lived' and 'breathed' and wrote about the findings identified in my practice. For example, I identified that there were times during my practice when an outcome for a participant may have been significantly different if I had increased the amount of wait time and structured silence during a musical interaction. Wigram, (2004) and Bunt & Hoskyns, (2002) suggest that making space or providing structured silence during a music therapy session is an important as sound to provide opportunities for meaningful things to happen. The awareness of structured silence and space or wait time in my practice became a focus area for learning during my practice that developed over the placement and research project. Further, I became aware of the highly refined timing skills that I needed to develop as a crucial part of my music therapy practice.

I was also concerned that during the gathering of data, both video and clinical notes, that one music therapy session with Nigel, when we were sitting at a computer screen together, watching an on-line tutor, "may not have looked like music therapy" (Shona, Reflective Diary, 2013) and whether it was appropriate for this session to be included in the data collection. The participants in this research were those music therapy clients who agreed to be part of the study. Information was sent to all the music therapy clients assigned to me at the RMTC. Three music therapy clients and their families responded to my request to be part of the research project. Following, discussion with my supervisor who guided me to consider the reasons why I had incorporated that activity during a music therapy session and that to consider eliminating such a session from the data would be "skewing the data" (Rickson, Lecture Notes, 2013). As a result the session remained in the collection of clinical data and the observations added a rich dimension to the interactive communication that transpired during that session.

6.3. Reflections on the Consent/Assent Process

I was delighted at the quick response and positive feedback I received when I invited and requested the parents and caregivers of the children and young person whose clinical data would form part of my research project. I was most grateful of their positive response in giving their consent and allowing me to use their child's/young person's clinical data in this research project. I believe I established a trusting relationship with the families and their enduring support was an indication of their respect for the work I completed.

6.4. Relating to Clinical Work

I valued the checking and monitoring processes of my supervisor. My supervisor knew me and the way I worked as a student music therapist and incorporated this knowledge into her personalized weekly communications with me. I also valued the personal communications and discussions I had with my colleagues at the Raukatauri Music Therapy Centre. These professional conversations enabled me to think more objectively about the terminology I was using in my practice and my research writing and ways to apply new thinking in a supported learning environment.

Through the numerous processes of observations, analysing and writing of the narrative transcripts I have developed a renewed skill set. This reflexive process, through the secondary analysis research process, has enabled me to acknowledge and reflect upon those influences as part of the contextual elements that have impacted on my understanding and practice as a music therapy student (Barry & O'Callaghan, 2008).

6.5. Strengths and Limitations

My role as a music therapy student and a researcher seems to have been both a strength and a limitation. As a music therapy student this study has given me an increased understanding of my music therapy practice for example, I have become increasingly more aware of the importance of using structured time or space in my practice and 'sit' with it for as long as it feels timely before doing, singing or saying anything. The research has also enabled me to explore and reconnect the Intensive Interaction literature and practices that I have been familiar with over a number of years, to my music therapy practice. This has been an important part of this research because creative music therapy interfaces with the theories of

Intensive Interaction and both disciplines are fundamental communication interventions in special education settings.

I was challenged when examining the categories and themes relating to, for example, **time** and **structured time and space**. While time and timing applied to the predominantly musical theme of the elements of music, it inevitably sat within the communication modes of non-musical responses. Further, I was challenged when considering the definition of **vocal activity**. It was difficult to distinguish sound, or spoken words, from music or singing and therefore I had to make an arbitrary distinction between what seemed to be music and what was predominantly a 'non-musical mode' of communicating. Additionally, the musical element of timbre of my voice quality presented me with questions concerning my emotional resonance relating to the influence of my 'human expression' (Aldridge, 1996 cited in Robarts, 2009) during the musical interactions and how influential my personal presence had been on the children's interactive responses.

The scope of the study limited the amount of data I could use. I was limited to three cases to reflect on in the study. Perhaps a total of six cases may have provided me with more insight into the various improvisational musical techniques in my practice, which potentially may have increased the richness of the data gathered.

6.6. Implications for Research and Training

This research helps to align two models of communication. It contains cross-disciplinary thinking (Pavlicevic, 2000) and it may enhance music therapy thinking and special education. This research has sought to find out more about the intricate relationship between Intensive Interaction features and music therapy interventions and therefore may help a range of professionals reflect on their work. It may also be of interest and support the interactive communication skills of music therapy students.

7. Conclusion

The features of Intensive Interaction appeared to be increasingly dominant within my music therapy practice and were client need and context related. Intensive Interaction and Improvisational Music Therapy or Creative Music Therapy share theoretical and practical foundations that are informed by knowledge about the nature of the mother-infant communication (Nordoff & Robbins, 1977; Stern, 1985; Trevarthen & Malloch, 2000; Oldfield, 2006) both of which feature sensitive, reciprocal responses from the practitioner to the participant or client. These responses are regarded as the foundation for communication and inter-personal skills. Improvisational music therapy, according to Pavlicevic, (2000) “taps a natural communicative resource: the mechanisms of non-music or non-verbal communication. These have a musical basis and continue to do so irrespective of whether we are “musical” or not and or whether we develop musical skills” (p. 282). Therefore, on a simplistic level, the elements of music feature in both approaches while improvisational music therapy combines the elements of music in a more complex musical structure of harmony, form and texture to generate a powerful emotional intimacy and to explore the particularly subtle interplay between the music therapist and the music therapy client. My curiosity is therefore, satisfied as I have sought to find “the music in the interaction and the interaction in the music” (Rainey Perry, 2008 p. 1). Further, the study has illustrated that we are all innately musical and that innate quality which according to Robarts, (2009) is “robustly rooted in our brain” (p. 378) is shared between both models of communication which is fundamental to the early beginnings of interactive communication. Therefore the outcome of this study may highlight for professionals with a particular emphasis on the practice of interactive communication, the significance of improvisational music therapy which may provide support to young people with communication challenges or learning difficulties.

References

- Aldridge, D., Dagmar, G. & Lutz, N. (1995). A preliminary study of creative music therapy in the treatment of children with developmental delay. *The Arts in Psychotherapy*, 22, 3, 189-205.
- Alvin, J. (1966). *Music therapy*. London: Stainer and Bell
- American Psychiatric Association, 1994. *Diagnostic and statistical manual of mental disorders*. Washington, DC: American Psychiatric Association.
- Ansdell, G. (1995). *Music for life: Aspects of creative music therapy with adult clients*. London: Jessica Kingsley Publishers.
- Argyropoulou, Z. & Papoudi, D. (2012). The training of a child with autism in a Greek preschool inclusive class through intensive interaction: a case study. *European Journal of Special Needs Education*, 27, 1, 99-114.
- Barber, M. (2007). Imitation, interaction and dialogue using Intensive Interaction: tea party rules. *Support for Learning*, 22, 3, 124-130.
- Barry, P. & O'Callaghan, C. (2008). Reflexive Journal Writing: A Tool for Music Therapy Student Clinical Practice Development. *Nordic Journal of Music Therapy*, 17, 1, 55-66.
- Bunt, L., & Hoskyns, S. (2002), (Eds.). *The handbook of music therapy*. Hove, United Kingdom: Brunner-Routledge.
- Brown, S. (2002). 'Hullo object! I destroyed you!' In L. Bunt and S. Hoskyns (Eds.) *The handbook of music therapy*. Hove, United Kingdom: Brunner-Routledge.
- Bruscia, K. (1987). *Improvisation models of music therapy*. Springfield, Illinois: Charles C Thomas.
- Bruscia, K. (1998). *Defining music therapy* (2nd ed.). Gilsum, NH: Barcelona Publishers
- Bruscia, K. (2005). Developing theory. In B. Wheeler (Ed.), *Music therapy research* (pp. 540-551). Gilsum, NH: Barcelona Publishers.
- Caldwell, P. (2006). Speaking the others language: Imitation as a gateway to relationship. *Infant and Child Development*, 15, 275-282.
- Culham, A. (2004). Getting in touch with our feminine sides? Men's difficulties and concerns with doing Intensive Interaction. *British Journal of Special Education*, 31, 2, 81-88.
- Dimitriadis, T. & Smeijsters, H. (2011). Autistic spectrum disorder and music therapy: theory underpinning practice. *Nordic Journal of Music Therapy*, 20, 2, 108-122.

- Elefant, C., Gold, C., & Wigram, T. (2010). *Music Therapy for Autistic Spectrum Disorder (A Review)*. The Cochrane Collaboration. Published by John Wiley and Sons LTD.
- Finter, K. (2008). The parallels between intensive interaction and music therapy.
Copy slides from an unpublished paper.
- Firth, G. (2008). A dual aspect process model of intensive interaction. *British Journal of Learning Disabilities*, 37, 43-49.
- Firth, G., Elford, H., Leeming, C. & Crabbe, M. (2007). Intensive interaction as a novel approach in social care: Care staff's views on the practice change process. *Journal of Applied Research in Intellectual Disabilities*, 21, 58-69.
- Gold, C., & Wigram, T. (2006). 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.
- Gold, C., Wigram, T., & Elefant, C. (2006). Music therapy for autistic spectrum disorder. *Cochrane Database of Systematic Reviews* (2), Art. No.: CD004381. DOI: 004310.001002/14651858.CD14004381.pub14651852.
- Graham, J. (2004). Communicating with the uncommunicative: music therapy with preverbal adults. *British Journal of Learning Disabilities*, 32, 24-29.
- Heaton, J. (2004). Reworking Qualitative Data. What is Secondary Analysis? *Sage Research Methods Online* ISBN: 9781849209878 DOI: 10.4135/97849209878 (1-8).
- Hepting, N.H. & Goldstein, H. (1996). What's natural about naturalistic language intervention? *Journal of Early Intervention* 20, 3 249-265.
- Hewett, D. Retrieved from www.intensiveinteraction.co.uk/about/how-does-intensive-interaction-work/ 20 November 2013.
- Hewett, D., Firth, G., Barber, M., & Harrison, T. (2012). *The Intensive Interaction Handbook* London: Sage Publications Ltd.
- Kellett, M. (2004). Intensive interaction in the inclusive classroom: Using interactive pedagogy to connect with students who are the hardest to reach. *International Journal of Research and Method in Education*, 27, 2, 175-188.
- Kim, J., Wigram, T. & Gold, C. (2008). The effects of improvisational music on joint attention behaviours in autistic children: A randomized controlled study. *Journal of Autism and Developmental Disorders*, 38, 9, 1758-1766.
- Leaning, B. & Watson, T. (2006). From the inside looking out – an Intensive Interaction group for people with profound and multiple learning disabilities. *British Journal of*

- Learning Disabilities*, 34, 103-109.
- Mahoney, J. (2012). Current practices in Nordoff-Robbins Music Therapy (NRMT): The Views of Contemporary Practitioners in 2011. <http://search.proquest.com/helicon.vuw.ac.nz/docview/1022038082/fulltextPDF?accountid=14782>
- Marks, D.F. & Yardley, L. (2004). Research methods for clinical and health psychology. Content and thematic analysis. *Sage Research Methods Online* 55-68. Online ISBN: 9781849209793. DOI: 10.4135/9781849209793.
- Massey University (2010). *Code of ethical conduct for research, teaching and evaluations involving human participants*. Palmerston North: Massey University.
- Molyneux, C. (2013). Personal communication.
- Molyneux, C., Willis, M., Talmage, A., Scoones, R., Travaglia, R., Gang, N-H. & Piggot-Irvine, E. (2011). *Collaborative goal setting and reviewing in music therapy for children with special needs: An action research project to improve practice and measure efficacy* (Unpublished report). Raukatauri Music Therapy Centre, Auckland, New Zealand.
- Muller, P. & Warwick, A. (1993). Autistic children and music therapy. In M. Heal and T. Wigram (Eds.) *Music therapy in health and education*. London: Jessica Kingsley Publishers.
- New Zealand Society for Music Therapy (2006). *Code of Ethics for the Practice of Music Therapy in New Zealand*.
- Nind, M. (1996). Efficacy of Intensive Interaction: Developing Sociability and communication in people with severe learning difficulties using an approach based on caregiver-infant interaction. *European Journal of Special Needs Education*, 11, 1, 48-66.
- Nind, M. (1999). Intensive Interaction and Autism: a useful approach? *British Journal of Special Education*, 26, 2, 96-102.
- Nind, M. & Hewett, D. (1994). *Access to Communication: Developing the basics of communication with people with severe learning difficulties through Intensive Interaction*. David Fulton.
- Nind, M. & Powell, S. (2000). Intensive Interaction and Autism: Some Theoretical Concerns. *Children & Society*, 14, 98-109.
- Nordoff, P. (1998). Exploration eight. Triads and inversions in their relation to the interval

- concept. In C. Robbins & C. Robbins (Eds.), 1998. *Healing heritage: Paul Nordoff exploring the tonal language of music*. Gilsum, NH: Barcelona Publishers.
- Nordoff, P. & Robbins C. (1977). *Creative music therapy*. New York: The John Day Company.
- Nordoff, P. & Robbins, C. (2007). (2nd ed.). *Creative music therapy: A guide to fostering clinical musicianship*. Barcelona Publishers: Gilsum, New Hampshire.
- Oldfield, A. (2006). *Interactive music therapy – a positive approach: Music therapy at a child development centre*. London: Jessica Kingsley Publishers.
- Oldfield, A. & Flower, C. (2008). *Music therapy with children and their families*. London: Jessica Kingsley Publishers.
- Pavlicevic, M. (1990). Dynamic interplay in clinical improvisation. *Journal of British Music Therapy*, 4(2), 5-9.
- Pavlicevic, M. (1995). Growing into sound and sounding into growth: Improvisation groups with adults. *Arts in Psychotherapy*, 22(4), 359-367.
- Pavlicevic, M. (1997). *Music therapy in context: Music meaning and relationship*. London: Jessica Kingsley Publishers.
- Pavlicevic, M. (2000). Improvisation in music therapy: Human communication in sound. *Journal of Music Therapy*, 37(4), 269-285.
- Pavlicevic, M. & Ansdell, G. (2004). *Community music therapy*. London: Jessica Kingsley Publishers.
- Pavlicevic, M. & Trevarthen, C. (1989). A musical assessment of psychiatric states in adults. *Psychopathology*, 22(6), 325-367.
- Powers, N. & Trevarthen, C. (2009). Voices of shared emotion and meaning: Young infants and their mothers in Scotland and Japan. In S. Malloch and C. Trevarthen (Eds.). *Communicative musicality: Exploring the basis of human companionship*. New York: Oxford University Press.
- Rainey Perry, M. (2008). The music in the interaction and the interaction in the music. Australasian 'Down Under' Inaugural Intensive Interaction Conference, 2008 Brisbane. *Copy slides from an unpublished paper*.
- Raukatauri Music Therapy Centre (RMTTC), 2013. History and Early Beginnings of the Raukatauri Music Therapy Centre, Auckland. *Unpublished document*.
- Reaves, C.C. (1992). *Quantitative research for the behavioural sciences*. USA: John Wiley & Sons, Inc.

- Rickson, D.R. (2013). Lecture Notes 2013.
- Robarts, J. (1996). Music therapy for children with autism. In C. Trevarthen, K. Aitken, D. Papoudi & J. Robarts (Eds.). *Children with autism. Diagnosis and interventions to meet their needs*. London: Jessica Kingsley Publishers.
- Robarts, J. (2009). Supporting the development of mindfulness and meaning: Clinical pathways in music therapy with a sexually abused child. In S. Malloch and C. Trevarthen (Eds.). *Communicative musicality: Exploring the basis of human companionship*. New York: Oxford University Press.
- Rogers, C. R. (1961). *On becoming a person*. Boston: Houghton Mifflin.
- Ruud, E. (1998). *Music therapy improvisation, communication and culture*. Gilsum, NH: Barcelona Publishers
- Stern, D. (1977). *The first relationship*. London: Fontana/Open Books Publishing Limited.
- Stern, D. (1985). *The interpersonal world of the infant*. New York: Basic Books.
- Shona, (2013). Reflective Diary 2013.
- Thomas, D.R. (2006). A general inductive approach for analysing qualitative evaluation data. *American Journal of Evaluation*, 27, 2, 237-246.
- Tomlinson, J., (2012). Music therapy in a special school. Investigating the role of imitation and reflection in the interaction between music therapist and child. In J. Tomlinson, P. Derrington & A. Oldfield (Eds.), *Music therapy in schools. Working with children of all ages in mainstream and special education*. London and Philadelphia: Jessica Kingsley Publishers.
- Trevarthen, C. (2002). Autism, sympathy of motives and music therapy. *Enfance*, 1, (54), 86-99.
- Trevarthen, C. & Malloch, S.N. (2000). The dance of wellbeing: Defining the musical therapeutic effect. *Nordic Journal of Music Therapy*, 9 (2), 3-17.
- Oxford Paperback Dictionary and Thesaurus. (2009). M. Waite & S. Hawker (Eds.). Oxford, New York: Oxford University Press.
- Wheeler, B. L., & Kenny, C. (2005). Principles of qualitative research. In B. L. Wheeler (Ed.), *Music therapy research* (2nd ed.). Gilsum NH: Barcelona Publishers.
- Wheeler, B.L., Shultis, C.L. & Polen, D.W. (2005). *Clinical training guide for the student music therapist*. Gilsum, NH: Barcelona Publishers.
- Wigram, T. (2004). *Improvisation. Methods and techniques for music therapy*

- clinicians, educators and students.* London, United Kingdom. Jessica Kingsley.
- Wigram, T. Pedersen, I.N., & Bonde, L.O. (2002). *A comprehensive guide to music therapy: theory, clinical practice, research and training.* London: New York: J. Kingsley Publishers.
- Williamson, J. & Barber, M. (2006). Reflective tool for Intensive Interaction. *Unpublished document.* In M. Barber (2007), Imitation, interaction and dialogue using Intensive Interaction: tea party rules. *Support for Learning* 22, 3 124-130.
- Wosch, T. & Wigram, T. (2007), (Eds.). *Microanalysis in Music Therapy: Methods, Techniques, and Applications for Clinicians, Researchers, Educators and Students.* London: Jessica Kingsley Publishers.
- Zeedyk, M.S. (2009). Fostering social engagement in Romanian children with communicative impairments: the experiences of newly trained practitioners of Intensive Interaction. *British Journal of Learning Disabilities*, 37, 186-196.

Appendices

Appendix 1: Facility Information Sheet



Date:

To: [REDACTED], Head of Clinical Services, Raukatauri Music Therapy Centre, Grey Lynn Auckland.

Re: Request for Permission to Use Clinical Records for Research Purposes

As a second year music therapy student of the Masters of Music Therapy degree at the New Zealand School of Music, I am required to conduct research relating to my clinical placement. I am writing to you to seek your permission to use the clinical records I have generated at Raukatauri Music Therapy Centre (RMTC), for research purposes.

Research Project

I will be conducting theoretical research through secondary analysis of data. My research is tentatively entitled “Exploring the relationship between music therapy and intensive interaction practices”. I plan to explore the differences, commonalities and or similarities between my music therapy practice and intensive interaction, which is a communication approach used in teaching.

With informed consent, I plan to analyse my clinical notes and video recordings relating to five different children if possible. I intend to examine five minute video clips of five sessions of music therapy using a microanalysis procedure similar to that used by Schumacher and Calvert, 2007 in Wosch & Wigram (2007).

Ethical Issues

The primary caregivers of the children will be asked for their informed consent to use the children’s data for research purposes. I will also seek informed consent or assent from the children if they are able to give it. The information provided to the children will be written in a language that they can understand. Both parties will be given adequate time to consider the implications of their involvement, before giving informed consent.

Confidentiality will be maintained at all times. I will remove the names of the children and the facility from all reports, presentations and publications related to this research. However,

because the RMTC is the only dedicated music therapy centre in New Zealand, there is a high risk that the centre will be identifiable.

I will provide a summary of the findings of the research for RMTC and participants. After successful completion, the full exegesis will be available to view in the Massey and Victoria University libraries. A paper based on the study may be offered for publication at a later date.

Please contact me or my research supervisor, Dr Daphne Rickson, if you have any questions about this project. Contact details are provided below.

This project has been reviewed and approved by the New Zealand School of Music Postgraduate committee. The Chairs of Massey University Human Ethics and Health and Disability Ethics Committees have given generic approval for the music therapy students to conduct studies of this type. The music therapy projects have been judged to be low risk and, consequently, are not separately reviewed by any Human Ethics Committees. The supervisor named below is responsible for the ethical conduct of this research. If you have any concerns please contact the supervisor or, if you wish to raise an issue with someone other than the student or supervisor, please contact Professor John O'Neill, Director, Research Ethics, telephone 06 350 5249 email humanethics@massey.ac.nz

Dr Daphne Rickson (Research Supervisor)

Daphne.rickson@nzsm.ac.nz

Shona How (Researcher)

gunado@xtra.co.nz and shona@rmtc.org.nz

Reference

Schumacher, K. & Calvet, C. (2007) in T. Wosch & T. Wigram (2007), (Eds.), *Microanalysis in Music Therapy: Methods, Techniques and Applications for Clinicians, Researchers, Educators and Students*. London: Jessica Kingsley Publishers

Appendix 2: Facility Consent Form



Title of Research

Exploring the Relationship between music therapy and intensive interaction practices

Raukatauri Music Therapy Centre Consent Form

I have read Shona How's letter dated requesting permission to use Raukatauri Music Therapy Centre clinical records for research purposes. I have had details of the study explained to me and my questions to date have been answered to my satisfaction. I understand that I may ask further questions at any time.

I agree/do not agree to allow Shona How to access and use clinical records, including video footage data, kept at the Raukatauri Music Therapy Centre, to reflect upon and analyse for research purposes.

I agree to Raukatauri Music Therapy Centre's data being used in this study under the conditions set out in the Information Sheet.

Signature: _____ Date: _____

(Head of Clinical Services)

Full name printed: _____

Appendix 3: Parent/Caregiver Information Sheet



Information Sheet for Primary Caregivers

Title of Research

Exploring the Relationship between music therapy and intensive interaction practices

Date:

To: Primary Caregivers/Parents

Researcher Introduction

I am a second year Master of Music Therapy student at the New Zealand School of Music. As part of my study I am required to undertake a clinical placement and to conduct research relating to my experience as a student music therapist.

Project Description

I would like to explore the commonalities and differences between my music therapy practice and an educational communication approach known as Intensive Interaction. Intensive Interaction is a recognised teaching approach for children and young people who experience difficulties with learning and relating to others. I have used this approach in my role as a teacher, and sense there is a relationship between these two practices. I would like to explore this potential relationship in order to develop and broaden my music therapy knowledge and practice.

I am writing to you because I would like to use the data (clinical notes and video footage) that was collected as part of my clinical practice at the Raukatauri Music Therapy Centre (RMTC)

and which relates to your child. I will be seeking informed consent to use data relating to other children too. I plan to describe in detail the type of responses which occur during specific five-minute time frames of music therapy interaction.

I will also be asking your child to give informed consent, or assent, if he/she is able to do so. A separate sheet will be provided. Please help, or allow someone else to help your child to make a decision as appropriate.

Participant Identification and Recruitment

I will not use your child's name but I will be using the name of the music therapy centre. As you are aware, the music therapy centre your child attends is relatively unique and the music therapy community in New Zealand is very small. Therefore, the likelihood of RMTC being identified is extremely high. The management at RMTC has requested the centre be identified and the New Zealand School of Music, Wellington has agreed to this arrangement.

Data Management

Research data will be kept on my personal, secure computer during the research period and later stored for five years at the New Zealand school of Music, Wellington, in a locked cabinet. After a period of five years the data will be destroyed.

During the examination process, findings will be presented to a panel, including internal and external examiners.

I will provide you with a summary of my project once it has been submitted and approved by the New Zealand School of Music. The published exegesis will also be available in both Massey University, and Victoria University libraries. A paper based on the exegesis might also be submitted for publication in a professional peer reviewed journal.

Participant's Rights

You are under no obligation to give permission for your child's data to be used for research purposes. If you decide to allow it to be used, you have the right to:

- ask any questions about the study at any time until it is completed;
- provide information on the understanding that your name will not be used unless you give permission for it to be used;

- be given access to a summary of the project findings when it is concluded

Please contact me or my research supervisor, Dr Daphne Rickson, if you have any questions about my project.

This project has been reviewed and approved by the New Zealand School of Music Postgraduate committee. The Chairs of Massey University Human Ethics and Health and Disability Ethics Committees have given generic approval for the music therapy students to conduct studies of this type. The music therapy projects have been judged to be low risk and, consequently, are not separately reviewed by any Human Ethics Committees. The supervisor named below is responsible for the ethical conduct of this research. If you have any concerns about the conduct of this research, please contact the supervisor or, if you wish to raise an issue with someone other than the student or supervisor, please contact Professor John O'Neill, Director, Research Ethics, telephone ... email: ...

Dr Daphne Rickson (Research Supervisor)

Shona How (Researcher)

Appendix 4: Parent/Caregiver Consent Form



Title of Research

Exploring the Relationship between music therapy and intensive interaction practices

Parents Caregivers Guardians Consent Form

I acknowledge that I have read Shona How's letter dated
.....requesting permission to use my child's clinical data for research
purposes. I have had details of the study explained to me and my questions to date have been
answered to my satisfaction. I understand that I may ask further questions at any time.

I agree/do not agree that Shona How may use my child's clinical notes and other documents,
including video footage, for reflection and analysis for research purposes, under the
conditions set out in the Information Sheet.

Signature: _____ Date: _____
(Primary caregiver/s)

Full name/s printed: _____

Appendix 5: Child Information and Consent Form



Child/Student Information and Consent Form

Dear

I am a student, just like you and I am learning about doing music with children. I want to write a story about doing music with you, and other children. As you know, all the music we play together is recorded on a video. If it's ok with you, I would like to look at the videos to help me remember what we did. Then I can write about it.

When I have finished writing my story I'll tell you about it and I will give a copy of the story to your Mum and Dad. You can also ask them to tell you about it. The story will also be in two libraries so other music people can read it.

Your Mum and Dad have said it is ok for me to write my story and use the videos but that doesn't mean you have to say it's ok. We will still keep playing music together, even if you say no.

Please take time to think about this. If you have a question, ask me or another person who looks after you. If you would like to be part of my story please write your name and date by the smiley-face below. You could ask an adult to help you if you are not sure what to do.



Name:

Date:

Appendix 6: Team Member Information Sheet



Date:

To: [REDACTED], Registered Music Therapist and Clinical Supervisor, Raukatauri Music Therapy Centre, Auckland.

Re: Request for Permission to Use Clinical Records for Research Purposes

As a second year music therapy student of the Masters of Music Therapy degree at the New Zealand School of Music, I am required to conduct research relating to my clinical placement. I am writing to you to seek your permission to use: (1) the video data relating to the co-music therapist role you facilitate and share with me and (2) the clinical records, including reports you have written and reflexive notes I have kept in response to those reports and meetings we have had, while on placement at Raukatauri Music Therapy Centre, (RMTC) for research purposes.

Research Project

I will be conducting theoretical research through secondary analysis, which is tentatively entitled “Exploring the relationship between music therapy and intensive interaction practices”. I would like to explore the differences, commonalities and or similarities between my music therapy practice and intensive interaction, which is a communication approach used in teaching.

With informed consent I plan to analyse my clinical notes and video recordings relating to five sessions, including the two clients we jointly share as co-therapists, if possible. I intend to examine five minute video clips of five sessions of music therapy using an approved microanalysis procedure similar to that used by Schumacher and Calvert, 2007 in Wosch & Wigram (2007).

Further, with informed consent I will be referring to the reports you have written about my music therapy practice and any reflexive notes I have made in response to those reports and meetings that have occurred during my placement at the RMTC.

Ethical Issues

The primary caregivers of the children will be asked for their informed consent to use the children's data for research purposes. I will also seek informed consent or assent from the children and young people if they are able to give it. The information to the children and young people will be written in a language that they can understand. Both parties will be given adequate time to consider the implications of their involvement, before giving informed consent.

Confidentiality will be maintained at all times. I will remove the names of the children and young people from all reports, presentations and publications related to this research. However, because the RMTTC is the only dedicated music therapy centre in New Zealand, and there is a high risk that the centre will be identifiable, management has requested that the centre be identified. The New Zealand School of Music has agreed to this arrangement. I will provide a summary of the findings of the research for RMTTC and participants. After successful completion, the full exegesis will be available to view in the Massey and Victoria University libraries. A paper based on the study may be offered for publication at a later date.

Please contact me or my research supervisor, Dr Daphne Rickson, if you have any questions about my research project. Contact details are referred to below.

This project has been reviewed and approved by the New Zealand School of Music Postgraduate committee. The Chairs of Massey University Human Ethics and Health and Disability Ethics Committees have given generic approval for the music therapy students to conduct studies of this type. The music therapy projects have been judged to be low risk and, consequently, are not separately reviewed by any Human Ethics Committees. The supervisor named below is responsible for the ethical conduct of this research. If you have any concerns please contact the supervisor or, if you wish to raise an issue with someone other than the student or supervisor, please contact Professor John O'Neill, Director, Research Ethics, telephone 06 350 5249 email humanethics@massey.ac.nz

Dr Daphne Rickson (Research Supervisor)

Daphne.rickson@nzsm.ac.nz

Shona How (Researcher)

gunado@xtra.co.nz and shona@rmtc.org.nz

Reference

Schumacher, K. & Calvet, C. (2007) in T. Wosch & T. Wigram (2007), (Eds.), *Microanalysis*

in Music Therapy: Methods, Techniques and Applications for Clinicians, Researchers, Educators and Students. London: Jessica Kingsley Publishers

Appendix 7: Team Member Consent Form



Title of Research

Exploring the Relationship between music therapy and intensive interaction practices

Team Member(s)

I have read Shona How's letter datedrequesting permission to use reports and notes from our meetings and discussions, for research purposes. I have had the details of the study explained to me and my questions to date have been answered to my satisfaction. I understand that I may ask further questions at any time.

I agree/do not agree to allow Shona How to use reports and notes from our meetings and discussions, for research purposes.

Signature: _____ Date: _____

(Clinical Supervisor)

Full name printed: _____

Appendix 8: Sample Raw Data XL Sheet (#1.) Nigel (Pg. 1)

| Actual time | Analysed 5 minute sequence | Participant Response | Student Music Therapist Response | Music Therapy Intervention |
|-------------|----------------------------|---|---|--|
| 10.00 | 0.00 | Nigel closes the lid of the piano and moves from one piano stool to another piano stool beside table with opened laptop beside the piano; begins to look at the computer screen and moves the mouse to find site ; totally focused and engaged in this activity | Stands up from piano stool and moves to be close to computer table; looks on as Nigel 'sorts' the prepared internet Youtube clip for violin lesson one from authorized website. | Supporting role/ available |
| 10.01 | 0.01 | | | |
| 10.02 | 0.02 | | | |
| 10.03 | 0.03 | | | |
| 10.04 | 0.04 | Focused on violin site; "Yes please." | With back turned away from Nigel; reaching towards top of piano; "Do you want me to get the violin out?" | Gift?; Body language - probing |
| 10.05 | 0.05 | Nigel moves further to the left of the piano stool as if making space for SMT to join him sitting on the piano stool | Reaches for violin case placed on top of piano | |
| 10.06 | 0.06 | | Places violin case on lid of piano and takes violin and bow out of case. | |
| 10.07 | 0.07 | | | |
| 10.08 | 0.08 | | Stands close to right of Nigel, looking over his shoulder at the laptop; bow in right hand, violin in left hand; listening to instructions | Listening and supporting |
| 10.09 | 0.09 | | | |
| 10.10 | 0.10 | Sitting slightly slouched at arms distance from the computer screen; Nigel is fully engaged in listening to the instructions from the tutor on the violin first lesson site | Standing, looking at computer screen and listening to instructions | Listening and supporting |
| 10.11 | 0.11 | | | |
| 10.12 | 0.12 | | | |
| 10.13 | 0.13 | | | |
| 10.14 | 0.14 | | | |
| 10.15 | 0.15 | Remains focused and listening to tutor's instructions | Standing, looking at computer screen and listening to on-line tutor's instructions | Listening and supporting |
| 10.16 | 0.16 | | | |
| 10.17 | 0.17 | | | |
| 10.18 | 0.18 | | | |
| 10.19 | 0.19 | | | |
| 10.20 | 0.20 | Remains focused and listening to tutor's instructions | Standing, looking at computer screen and listening to on-line tutor's instructions | Listening and supporting |
| 10.21 | 0.21 | | | |
| 10.22 | 0.22 | | | |
| 10.23 | 0.23 | | | |
| 10.24 | 0.24 | Using right hand Nigel adjusts the position of the screen - pulling it towards him | | |
| 10.25 | 0.25 | Right hand index finger adjusts the volume on the screen | Standing, looking at computer screen and listening to on-line tutor's instructions | Listening and supporting |
| 10.26 | 0.26 | | | |
| 10.27 | 0.27 | | | |
| 10.28 | 0.28 | | | |
| 10.29 | 0.29 | | | |
| 10.30 | 0.30 | Focused and engaged in fast-forwarding lesson one | Standing, looking at computer screen and listening to on-line tutor's instructions | Listening and supporting |
| 10.31 | 0.31 | | | |
| 10.32 | 0.32 | | | |
| 10.33 | 0.33 | Looking at screen; right hand manipulating keys; open left hand /arm in triangular position resting on top of left leg | | |
| 10.34 | 0.34 | | | |
| 10.35 | 0.35 | | Standing, looking closely at computer screen "There's lesson one." | Listening and supporting response (vocal comment) |
| 10.36 | 0.36 | Focused and looking and screen and moving pages along : "No | | |
| 10.37 | 0.37 | we've done | Looking at computer screen and preparing to sit down on piano stool beside Nigel | |
| 10.38 | 0.38 | one." | | |
| 10.39 | 0.39 | | | |
| 10.40 | 0.40 | | Sitting beside Nigel on piano stool at computer screen, bow in right hand violin in left hand: "So we are on two now?" | modelling behaviour; supporting commentary |
| 10.41 | 0.41 | Focused and looking at the screen: "Yeah". | "ah, ok." | verbal response |
| 10.42 | 0.42 | | | |
| 10.43 | 0.43 | | | |
| 10.44 | 0.44 | | | |
| 10.45 | 0.45 | | Getting up from piano stool reaching to adjust knob (increase volume) on speaker(s) "So shall I turn it up a bit?" | Probing |
| 10.46 | 0.46 | | Standing and leaning to reach speaker, looking directly at Nigel while adjusting the volume; pausing for his response | Eye contact; Pausing/W |
| 10.47 | 0.47 | | | |
| 10.48 | 0.48 | | "Is that better"? | Probing |
| 10.49 | 0.49 | "yeah". (remains focused on looking at computer screen) | | |
| 10.50 | 0.50 | | | |
| 10.51 | 0.51 | | | |
| 10.52 | 0.52 | | | |
| 10.53 | 0.53 | | Standing up, prepare to give violin and bow to Nigel | |
| 10.54 | 0.54 | Nigel looks at the violin being passed to him; using both hands positions the violin (chin rest) to be close to his chin | Using left hand pass the violin to Nigel | |
| 10.55 | 0.55 | Looks at chin rest, using right hand repositions violin under his chin | | |
| 10.56 | 0.56 | | Focus on the computer screen; listening to tutor's instructions | Making space - listening |
| 10.57 | 0.57 | Looking at violin, adjusts violin and moves head and chin around to find comfortable position | Sitting (sharing) on piano stool; Bring left hand to cover face/chin/mouth in contemplative gesture | Modelling behaviour Gesture - facial expression |
| 10.58 | 0.58 | | | |
| 10.59 | 0.59 | | | |
| 11.00 | 1.00 | Looking at screen, listening to tutor; holding violin at neck with left hand; secures the violin under his chin; | Sitting (sharing) on piano stool; Leaning towards computer screen; hand near mouth; contemplative gesture; listening to on-line tutor | Gesture - facial expression |

Appendix 9: Sample Raw Data XL Sheet (#1.) Nigel (Pg. 2)

| | | | |
|-------|--|--|---------------------------------------|
| 11.01 | 1.01 Rests chin on chin-rest and secures violin in this position; glancing down the violin | | |
| 11.02 | 1.02 | Sitting on shared piano stool; look up (clock on wall) | Sharing of object |
| 11.03 | 1.03 Holding violin under his chin; looks at computer screen; listens to tutor | | |
| 11.04 | 1.04 | | |
| 11.05 | 1.05 Adjusts the violin under his chin; looks closely at the body of the violin | | |
| 11.06 | 1.06 | | |
| 11.07 | 1.07 | | |
| 11.08 | 1.08 | | |
| 11.09 | 1.09 | | |
| 11.10 | 1.10 Holding violin under chin; looking at computer screen; listening to tutor; repositions himself on the piano stool | | |
| 11.11 | 1.11 | | |
| 11.12 | 1.12 | | |
| 11.13 | 1.13 | | |
| 11.14 | 1.14 | | |
| 11.15 | 1.15 Changes position of violin to resting on his lap; right hand touching the strings; eyes glancing between computer screen and violin strings; listening to on-screen tutor | | |
| 11.16 | 1.16 | | |
| 11.17 | 1.17 | | |
| 11.18 | 1.18 | | |
| 11.19 | 1.19 | | |
| 11.20 | 1.20 Violin resting on lap, supported by left hand; eyes focused on the violin; using right hand fingers begins feeling the (top) surface of the violin in an exploratory manner | Glanced left towards Nigel at violin's chin rest | Eye contact; visual support |
| 11.21 | 1.21 | | |
| 11.22 | 1.22 | | |
| 11.23 | 1.23 Right hand touching shape and surface of the chin rest | | |
| 11.24 | 1.24 | | |
| 11.25 | 1.25 Using right hand fingers and rubs fingers in circular motion over surface of the chin rest | Look down closely at violin on Nigel's lap, focusing on chin rest | Visual cue |
| 11.26 | 1.26 | | |
| 11.27 | 1.27 | Resume looking at screen of computer, listening to on-line tutor | modelling; listening and supporting |
| 11.28 | 1.28 | | |
| 11.29 | 1.29 | Left hand away from mouth/chin; rests across lap on extended right arm | |
| 11.30 | 1.30 | Focusing on violin's chin rest | Visual cue |
| 11.31 | 1.31 | | |
| 11.32 | 1.32 | | |
| 11.33 | 1.33 | | |
| 11.34 | 1.34 Looking at SMT; repositions violin momentarily under his chin; using his left hand begins to investigate the shape, its thickness and texture of the chin rest | | |
| 11.35 | 1.35 | | |
| 11.36 | 1.36 Looks at SMT " I like the one on here". | | |
| 11.37 | 1.37 | Looking at Nigel and nodding affirmatively "mm" (low pitched) | Visual/eye contact; Vocal; Gesture |
| 11.38 | 1.38 | | |
| 11.39 | 1.39 | | |
| 11.40 | 1.40 Returns violin to resting position on his lap secured by both hands; looks at computer screen; listens to on-line tutor | Resumes looking at computer screen; listening to on-line tutor | supporting role and listening |
| 11.41 | 1.41 | | |
| 11.42 | 1.42 | | |
| 11.43 | 1.43 | | |
| 11.44 | 1.44 | | |
| 11.45 | 1.45 | Looks on as Nigel repositions violin under his chin and aligns face/chin with violin in horizontal position. "Does it dig into you?" | Visual and verbal communication (pr |
| 11.46 | 1.46 | | |
| 11.47 | 1.47 Repositions violin under chin; glancing at computer screen and listening to on-line tutor "No". | | |
| 11.48 | 1.48 | | |
| 11.49 | 1.49 | | |
| 11.50 | 1.50 Violin positioned under chin; continues to listen to on-line tutor | Glanced at violin positioned under Nigel's chin | Visual contact; supporting |
| 11.51 | 1.51 | | |
| 11.52 | 1.52 | | |
| 11.53 | 1.53 | Resume attention to focus on computer screen and listening to on-line tutor | modelling; supporting role and listen |
| 11.54 | 1.54 | | |
| 11.55 | 1.55 | | |
| 11.56 | 1.56 | | |
| 11.57 | 1.57 | | |
| 11.58 | 1.58 | | |
| 11.59 | 1.59 | | |
| 12.00 | 2.00 | Looking at computer screen and listening on-line tutor | modelling; supporting role and listen |

Appendix 10: Sample Raw Data XL Sheet (#1.) Nigel (Pg. 3)

| | | | |
|-------|--|--|---|
| 13.00 | 3.00 Violin in upright position, resting on top of left leg; eyes focused on left hand as he explores the pegs; | | |
| 13.01 | 3.01 | | |
| 13.02 | 3.02 Violin in upright position, resting on top of left leg; eyes focused on computer screen; listening | | |
| 13.03 | 3.03 | | |
| 13.04 | 3.04 | | |
| 13.05 | 3.05 | | |
| 13.06 | 3.06 | | |
| 13.07 | 3.07 | | |
| 13.08 | 3.08 | | |
| 13.09 | 3.09 | | |
| 13.10 | 3.10 Nigel slowly repositions violin to lie horizontally across top of his legs | | |
| 13.11 | 3.11 | | |
| 13.12 | 3.12 Violin repositioned horizontally across Nigel's lap (top of legs) | | |
| 13.13 | 3.13 | Looking down at violin, towards the 'bridge' | visual cue; violin and part of vic |
| 13.14 | 3.14 | | |
| 13.15 | 3.15 Brings violin up close to his face; looks closely at 'the bridge'; uses right hand to explore this feature; eyes focused on violin | Resume looking at computer screen and listening to on-line tutor | Visual cue; supporting and listen |
| 13.16 | 3.16 | | |
| 13.17 | 3.17 | | |
| 13.18 | 3.18 Looks closely at 'the bridge' on the violin; touches this with rh fingers | | |
| 13.19 | 3.19 | Looking down at violin; "Oh, I can see that." | Visual cue; Vocal activity - com |
| 13.20 | 3.20 Violin in horizontal position across Nigel's lap; Nigel raises his shoulders, inhaling loudly | | |
| 13.21 | 3.21 | Resume looking at computer screen and listening to on-line tutor | Visual cue; supporting and listen behaviour |
| 13.22 | 3.22 | | |
| 13.23 | 3.23 | | |
| 13.24 | 3.24 | | |
| 13.25 | 3.25 | | |
| 13.26 | 3.26 | | |
| 13.27 | 3.27 | | |
| 13.28 | 3.28 | | |
| 13.29 | 3.29 | | |
| 13.30 | 3.30 | | |
| 13.31 | 3.31 | | |
| 13.32 | 3.32 | | |
| 13.33 | 3.33 | | |
| 13.34 | 3.34 | | |
| 13.35 | 3.35 | | |
| 13.36 | 3.36 | | |
| 13.37 | 3.37 Brings violin up closer to eyes; looks at the positioning of the 'bridge' | | |
| 13.38 | 3.38 | | |
| 13.39 | 3.39 | Looks on as Nigel 'checks out' positioning of the the bridge | Visual cue - towards instrument |
| 13.40 | 3.40 Returns violin to resting on his lap; | | |
| 13.41 | 3.41 Reumes looking at computer screen and listening to on-line tutor | | |
| 13.42 | 3.42 | | |
| 13.43 | 3.43 | | |
| 13.44 | 3.44 | | |
| 13.45 | 3.45 Changes holding position of violin to almost cradling position - tucked under right arm, left hand fingers plucking and pulling gently at strings; eyes focused on this exploration | | |
| 13.46 | 3.46 | | |
| 13.47 | 3.47 | | |
| 13.48 | 3.48 Eyes focused on strings; using left hand index and middle fingers slowly slides up and down strings | | |
| 13.49 | 3.49 | Looking on at violin | Visual cue - instrument |
| 13.50 | 3.50 Violin in 'cradle' position; looking at computer screen; listening to on-line tutor; moving and adjusting position of left hand/wrist and fingers at middle neck of violin | Resume looking at computer screen and listening to on-line tutor | Visual Cue; Supporting; Time - l |
| 13.51 | 3.51 | | |
| 13.52 | 3.52 | | |
| 13.53 | 3.53 | | |
| 13.54 | 3.54 | Reposition self on edge of piano stool; right hand and left hand holding bow | Movement Activity - physical ges |
| 13.55 | 3.55 Looking at violin's scroll | Looking at bow; listening to on-line tutor | Visual Cue - instrument playing |
| 13.56 | 3.56 | | |
| 13.57 | 3.57 | | |
| 13.58 | 3.58 | Side-turn slightly left to look at computer screen; looking at screen; listening to on-line tutor; touching hairs of bow | Adjusting seating position; ges language; listening; sensory act |
| 13.59 | 3.59 | | |

Appendix 11: Sample Raw Data XL Sheet (#1.) Nigel (Pg. 4)

| | | | | |
|-------|------|--|---|---|
| 14.00 | 4.00 | Repositioning violin in 'cradle' position; rh thumb pulling strings in downward motion; left hand/wrist wrapped securely around neck/scroll end | Gliding left hand up and down hairs of the bow | Sensory activity ; modelling |
| 14.01 | 4.01 | | | |
| 14.02 | 4.02 | | | |
| 14.03 | 4.03 | | | |
| 14.04 | 4.04 | | | |
| 14.05 | 4.05 | Repositions violin across lap; left hand/wrist frees from wrapped position; fingers become free and separate on strings | Touching hair on bow near the handle end of bow; listening to on-line tutor | Sensory activity ; modelling |
| 14.06 | 4.06 | | | |
| 14.07 | 4.07 | | | |
| 14.08 | 4.08 | | | |
| 14.09 | 4.09 | | | |
| 14.10 | 4.10 | | | |
| 14.11 | 4.11 | | | |
| 14.12 | 4.12 | Lean slightly forward and looks right towards SMT holding the bow in right hand; "what?" | Touching the hair on the bow. | Sensory activity; modelling |
| 14.13 | 4.13 | | Looking at Nigel "I've just touched the strings". | Visual Cue - eye contact ; V |
| 14.14 | 4.14 | | | |
| 14.15 | 4.15 | Looks towards bow and SMT | "The hair". | Vocal activity - converse |
| 14.16 | 4.16 | | "Remember?" | Vocal activity - converse |
| 14.17 | 4.17 | Resumes focus on the computer screen; listening to on-line tutor | | |
| 14.18 | 4.18 | | Looking at the computer screen: "We talked about it last week, | Modelling behaviour; Vocal |
| 14.19 | 4.19 | | not to touch the hair | |
| 14.20 | 4.20 | | on the bow". | |
| 14.21 | 4.21 | | | |
| 14.22 | 4.22 | | | |
| 14.23 | 4.23 | | | |
| 14.24 | 4.24 | | | |
| 14.25 | 4.25 | | | |
| 14.26 | 4.26 | | | |
| 14.27 | 4.27 | | | |
| 14.28 | 4.28 | | | |
| 14.29 | 4.29 | | | |
| 14.30 | 4.30 | | | |
| 14.31 | 4.31 | | | |
| 14.32 | 4.32 | | | |
| 14.33 | 4.33 | | Looking at computer screen; readjusting glasses with left hand | Modelling behaviour; gestu |
| 14.34 | 4.34 | | | |
| 14.35 | 4.35 | | | |
| 14.36 | 4.36 | | | |
| 14.37 | 4.37 | | Looking at screen "come on girl!" | Disclosing (personal respon |
| 14.38 | 4.38 | Repositions violin up to under his chin; uses right hand index finger to begin plucking at strings; left hand in cupped position secures middle neck of violin, fingers in a row; eyes focused on computer screen; | | |
| 14.39 | 4.39 | | | |
| 14.40 | 4.40 | | | |
| 14.41 | 4.41 | Head bends forward, body slouched, violin 'locked' directly under chin, right arm covers outline frame of violin, left hand securing neck of violin; violin in angled (20 degrees) horizontal position; eyes looking down the body of violin | | |
| 14.42 | 4.42 | | | |
| 14.43 | 4.43 | | | |
| 14.44 | 4.44 | | | |
| 14.45 | 4.45 | Violin 'locked' under chin; looking at computer screen; listening | | |
| 14.46 | 4.46 | | | |
| 14.47 | 4.47 | Violin firmly 'locked' under chin; looks down the body of the violin | | |
| 14.48 | 4.48 | | With left hand, pass bow (left) to Nigel | Movement Activity - passin |
| 14.49 | 4.49 | Looks right towards SMT | | |
| 14.50 | 4.50 | Reaches with right hand to take bow | | |
| 14.51 | 4.51 | | | |
| 14.52 | 4.52 | | | |
| 14.53 | 4.53 | | | |
| 14.54 | 4.54 | | | |
| 14.55 | 4.55 | Positions bow in right hand; repositions violin under chin | | |
| 14.56 | 4.56 | | | |
| 14.57 | 4.57 | | | |
| 14.58 | 4.58 | Looks right and passes bow back to SMT; focuses on hand/finger positioning of right hand to hold bow | Looking at bow, using left hand take bow back, right hand grasps handle; eyes focused on handle | Visual cue; Movement Activ passing bow |
| 14.59 | 4.59 | | | |
| 15.00 | 5 | Looks at bow; receives it from SMT in right hand; positions right hand/fingers at end of bow; holds bow diagonally in front of chest. | Looking at screen, listening to on-line tutor, use right hand to pass bow across lap to Nigel | Visual cue; modelling behav |

Appendix 12: Sample Raw Data Narrative Analysis Toby (Pg.1)

This five minute segment is from the third 30 minute weekly music therapy assessment session. It begins after five minutes from the beginning of the session. Toby is sitting on one of the piano stools with his back to the piano keyboard facing me. Using his left hand he reached to play the piano as he requested the various songs he wanted me to play on the guitar. I was sitting on a piano stool opposite him blancing between him and the finger positions of my left hand on the guitar. I was singing an improvised melody personalising Toby's piano playing. He played in an increasingly chaotic and detached manner white keys which he could reach easily. Toby made eye contact with me. At 5.15 sec Toby looked at me and reached out and took the guitar from me. I made direct eye-contact with him, with raised eye-brows and surprise (raised pitch level) in my voice I exclaimed "oh" and handed the guitar to him. Toby then placed the guitar against the wall. I looked at Toby, paused and waited for him. Toby sat upright and placed his hands on the tops of his legs. He looked at me. I repositioned myself in front of the large gathering drum and using two hands began beating on the drum with an accented pulse "Oma Rapati". I looked at Toby and began to softly sing the words of the song "Oma Rapati". Toby looked at me and started to sing with me. As Toby's volume increased I decreased my volume and synchronized the tempo and pulse with his singing. At 6.00 Toby, looked at me, paused and began to sing "Hot Cross Buns". I looked directly at him and said "you do know that one as well". As Toby led the singing I joined in with him beating out a pulse on the gathering drum. At the end of the song Toby sat upright, rigid and very still. He looked at me, paused and waited in silence. I looked at Toby, smiled and said "beautiful singing Toby". I waited for Toby to suggest another song. I then ocused my eyes on the drum between us and began tapping my fingers on it, softly and slowly to the rhythm of "Row, Row, Row Your Boat" and swayed gently from side to side. I started to sing "Row Row" very softly, looked at Toby until I had finished singing it once through and then returned to singing "Oma Rapati" softly and slowly. Toby sat quietly and then at 6.59 sec he reached out, using his right hand, he rubbed the surface of the drum in a circular controlled manner. He then reached down and lifted up the drum. I looked closely at what he was doing and asked "what's underneath the drum Toby?" We explored the inside of the drum together Toby looked inside the drum, I looked inside the drum with him. Toby grinned and smiled. I smiled back at him and placed the drum on my knees with the open-end facing Toby and beat on the surface with my left hand singing "Oma Rapati". Toby then turned towards the piano and used his right hand to play chaotic single keys in a loud, short and detached manner. I finished singing the song and offered the drum to Toby. At 8.00 sec Toby turned away from the piano and using two hands lifted the drum away from me and placed it on the floor. I assisted him with replacing the drum on the floor. I looked at Toby and with open-hand gesture invited him to join me at the drum. He then took my right hand and placed it on the keyboard of the piano. Toby then repositioned himself at the piano, near the middle

- Comment [SH1]: L3 Physical positioning; proximity
- Comment [SH2]: L3 Visual
- Comment [SH3]: L6/L7 Sing
- Comment [SH4]: L9/L10 Visual; Facial expression
- Comment [SH5]: L10 Vocal
- Comment [SH6]: L10/L11 Physical action; Object
- Comment [SH7]: L11/L12 Visual; Space
- Comment [SH8]: L13 Physical positioning
- Comment [SH9]: L13/L14 Modelling
- Comment [SH10]: L14 Framing/Structure
- Comment [SH11]: L14 Visual
- Comment [SH12]: L15 Sing
- Comment [SH13]: L16/L17 Synchronize
- Comment [SH14]: L18/L19 Visual, Vocal
- Comment [SH15]: L19 Vocal support
- Comment [SH16]: L19 Validation; Framing/Structure
- Comment [SH17]: L21 Visual; Vocal
- Comment [SH18]: L22 Space
- Comment [SH19]: L22 Visual
- Comment [SH20]: L23/L24 Role modelling
- Comment [SH21]: L24 Physical movement
- Comment [SH22]: L24/25 Vocal activity
- Comment [SH23]: L25 Visual
- Comment [SH24]: L26 Vocal activity; Singing
- Comment [SH25]: L28 Visual
- Comment [SH26]: L28/L29 Vocal
- Comment [SH27]: L29 Movement Activity
- Comment [SH28]: L30 Visual
- Comment [SH29]: L31 Visual
- Comment [SH30]: L31 Physical positioning Object
- Comment [SH31]: L32 Structure; Grounding; Singing
- Comment [SH32]: L34 Structure; Grounding; Singing; Jodis/address
- Comment [SH33]: L36 Physical support; Visual
- Comment [SH34]: L37 Physical gesture

Appendix 13: Sample Raw Data Narrative Analysis Toby (Pg.2)

register and looked on as I repositioned myself at the piano at the lower register. I exclaimed in excitement "Whi hoo!" as I joined Toby at the piano. Toby looked at me and said "Ah!" and he began playing the white keys using his index fingers of his right hand and left hand an alternating repeated pattern of B/D at a moderately fast tempo. He then played middle C and octave C. I imitated this octave pattern starting at C – C; B – B; and matched his tempo and volume. I then paused, looked at Toby before I started to repeat the pattern. Toby continued to play his alternating minor 3rd interval of B-D. At 8.47 sec Toby paused, looked at the keyboard and using his right hand, wrist and arm, began a sequence of sweeping glissandos (ascending and descending). He moved from side to side synchronising with the sweeping movements of his wrist and right arm on the keys. I moved from side to side matching his movements and timing. I looked at Toby and glanced at the keys and synchronized glissando right hand sweeping movements with his ascending and descending patterns. At 9.00 I changed my musical response to ascending and descending arpeggios in C major and then progressed to playing the bass chords and melody of "Hot Cross Buns". Toby stopped playing the glissando sweeping pattern and began to sing. He nodded his head in strict time while playing 2 note discords in time with the lyrics of the song. A turntaking exchange developed as Toby sang the beginning of the song, some phrases, and left spaces – which I filled with lines of the song. I also left spaces in the lyrics/song for Toby to complete. At 9.29 sec we sang together while I played a simple chord accompaniment and glanced at Toby from time to time. Toby smiled and started to mouth the words of the song. I slowed the tempo of the music to match his timing and reflect his mood. At the last bar I sang "hot cross ..." and waited in anticipation for Toby to sing the last word. I looked at Toby, paused and smiled. Toby smiled and began sweeping glissandos with his left hand.

Comment [SH35]: L39 Physical positioning

Comment [SH36]: L40 Vocal

Comment [SH37]: L43 Imitation

Comment [SH38]: L44 Matching

Comment [SH39]: L44/L45 Space: Visual; Repeating

Comment [SH40]: L49 Physical movement; Matching

Comment [SH41]: L49/51 Visual; Imitation; Empathetic improvisation

Comment [SH42]: L51 Change: Intervening

Comment [SH43]: L55 Turntaking: Dialoguing; Singing

Comment [SH44]: L56 Turntaking: Singing

Comment [SH45]: L56 Space

Comment [SH46]: L57 Singing: Synchronize; Together

Comment [SH47]: L57/58 Accompaniment; Visual

Comment [SH48]: L59/L60 Matching: Reflecting;

Comment [SH49]: Sing; Time/Space Anticipation

Comment [SH50]: Visual; Time

Appendix 14: Sample of Theme/Coded Analysis (Pg.1)

| Behaviour | Theme/Coded Analysis |
|--|--|
| <p>Behaviour: GESTURES AND BODY LANGUAGE (FACIAL EXPRESSION?)</p> <p>Page: Session 4</p> | |
| <p>open arms and palms up </p> | <p>Comment [s51]: L35 Body language</p> |
| <p>open hands palms up </p> | <p>Comment [s52]: L64 Body language</p> |
| <p>extend my arms and open-hands to offer encouragement and acceptance </p> | <p>Comment [s53]: L66/L67 Body language</p> |
| <p>intermittent eye-contact, open-hand gestures and informative language </p> | <p>Comment [s54]: L74/L75 Visual; Body language; L76 Vocal comment</p> |
| <p>used open hand gestures to emphasise </p> | <p>Comment [s55]: L101 Body language</p> |
| <p>Nigel Session 6 (2)</p> | |
| <p>I looked at him side-on and nodded my head from side to side "I didn't tune it this morning no" </p> | <p>Comment [SH56]: L27/28 Visual; Body language; Vocal</p> |
| <p>touching the hairs on the bow. </p> | <p>Comment [SH57]: L39 Object - Sensory</p> |
| <p>LIAM Session 5 2/2</p> | |
| <p>I smiled and I looked at him </p> | <p>Comment [SH58]: L12 Visual</p> |
| <p>"What have I got over here?" What's in the basket? What have I got today </p> | <p>Comment [SH59]: L12/L13 Visual</p> |
| <p></p> | <p>Comment [SH60]: L62/L66 Vocal</p> |
| <p>TOBY Session 5 1/2</p> | |
| <p>I made direct eye-contact with him, with raised eye-brows and surprise (raised pitch level) in my voice I exclaimed "oh" and handed the guitar to him. </p> | <p>Comment [SH61]: L9/L10 Visual; Facial expression</p> |
| <p></p> | <p>Comment [SH62]: L10 Vocal</p> |
| <p>I looked at Toby, smiled and said "beautiful singing Toby" </p> | <p>Comment [SH63]: L10/L11 Physical action; Object</p> |
| <p>I then focused my eyes on the drum between us and began tapping my fingers on it, softly and slowly to the rhythm of "Row, Row, Row Your Boat" </p> | <p>Comment [SH64]: L21 Visual; Vocal</p> |
| <p></p> | <p>Comment [SH65]: L22 Visual</p> |
| <p>I waved gently from side to side, I started to sing "Row Row" very softly, I looked at Toby. </p> | <p>Comment [SH66]: L23/L24 Role modelling</p> |
| <p>I looked inside the drum with him, Toby grinned and smiled, I smiled back at him and placed the drum on my knees. </p> | <p>Comment [SH67]: L24 Physical movement</p> |
| <p>I assisted him with replacing the drum on the floor. I looked at Toby and with open-hand gesture invited him to join me at the drum. </p> | <p>Comment [SH68]: L24/25 Vocal activity</p> |
| <p></p> | <p>Comment [SH69]: L25 Visual</p> |
| <p></p> | <p>Comment [SH70]: L30 Visual</p> |
| <p></p> | <p>Comment [SH71]: L31 Visual</p> |
| <p></p> | <p>Comment [SH72]: L31 Physical positioning Object</p> |
| <p></p> | <p>Comment [SH73]: L36 Physical support; Visual</p> |
| <p></p> | <p>Comment [SH74]: L37 Physical gesture</p> |

Appendix 15: Sample of Theme/Coded Analysis (Pg.2)

| | |
|---|---|
| I looked at Toby, paused and smiled | Comment [SH75]: L61 Visual: Speech: Facial Expression |
| TOBY Session 7. 2/2 | |
| I looked at Toby and smiled) | Comment [SH76]: L7/L8 Visual: Facial Expression |
| I looked at Toby and smiled during this musical interaction.] | Comment [SH77]: L13 Visual: Facial expression |
| I looked at Toby, smiled and used 2 hands and played ascending clusters of keys: quaver, crotchet, quaver, crotchet and then laughed.] | Comment [SH78]: L15 Visual |
| I looked at him and gestured with my right hand (four finger open-hand pointing) towards the keys of the piano to indicate his turn | Comment [SH79]: L15 Facial expression |
| | Comment [SH80]: L15/L16 Mirroring |
| | Comment [SH81]: L16/L17 Vocalisation - laughter |
| | Comment [SH82]: L33/L34 Visual: Gesture |
| LIAM Session 3 1/2 | |
| I copied this and looked at him, smiled and moved my head and upper body from side to side in a playful manner | Comment [s83]: L16/L17 Visual: Facial Expression: body language |
| I looked on | Comment [s84]: L22 Visual |
| Nigel Session 6 (2/2) | |
| Modelling (including role) | |
| I listening to the instructions] | Comment [s85]: L9 Listening: Role modelling |
| I looking at the screen I asked] | Comment [SH86]: L10 Visual: Role modelling: Vocal |
| I remained sitting beside Nigel on the piano stool] | Comment [s87]: L17/L18 Physical positioning and proximity: Role modelling |
| I listened | Comment [SH88]: L46 Listening: Role modelling |
| Validation | |
| Nigel Session 4 (1/2) | |
| I returned to sitting at the piano and respond to Nigel's detached and reoccurring rhythm pattern of quaver, quaver, crotchet, crotchet, crotchet | Comment [SH89]: L103-L105 Physical positioning – Receding: Validation |

Appendix 16: Sample Raw Data Correlations XL Sheet (#2.) Liam (Pg.1)

| | | | | | |
|--------------------------------|---|---|---|--------------------------------|-------------------------|
| Liam S3 1/2 | | | | Liam S5 2/2 | |
| Source | Improv Technique | <i>Non-Music Com.</i> | II Intervention | Source | Improv Technique |
| Line 2 XL doc. | Accompanying - using a different instrument; providing framework and structure within a song (familiar melody, improvised lyrics) | | Giving good face; Being together | Line 2 XL doc. | Modelling singing |
| <i>Line 2-3 Transcript</i> | | <i>Movement Activity physical positioning; Visual Cue</i> | <i>Physical positioning and proximity; giving good face</i> | <i>Line 2-3 Transcript</i> | |

Appendix 17: Sample Raw Data Correlations XL Sheet (#2.) Liam (Pg.2)

| | | | | | |
|------------------------------|------------------------|---|------------------------------|------------------------------|--|
| <i>Line 7 Transcript</i> | <i>Visual Cue</i> | <i>Giving good face; stimuli - sing</i> | <i>Line 6-7 Transcript</i> | | <i>Visual Cue</i> |
| <i>Line 7 XL doc.</i> | <i>Eye contact</i> | <i>Giving good face;</i> | <i>Line 10 XL doc.</i> | <i>copying repeating</i> | |
| | | | <i>Line 12-13 Transcript</i> | | <i>Visual Cue</i> |
| | | | <i>Line 15 Transcript</i> | | <i>Vocal activity; Time</i> |
| | | | <i>Line 16-18 Transcript</i> | | <i>Movement Activity phys celebration gesture; Visu Cue; physical gesture; V Activity;</i> |

Appendix 18: Sample Raw Data Correlations XL Sheet (#2.) Liam (Pg.3)

| | | | | | |
|------------------------------|--|---------------------------------------|---|---------------------------|----------------|
| Line 8 XL doc. | Pause/waiting | | Pauses | Line 19 XL doc. | shaping |
| <i>Line 9-10 Transcript</i> | | <i>Visual Cue; Physical gesture</i> | <i>Giving good face</i> | <i>Line 20 Transcript</i> | |
| Line 11 from XL doc | Singing ; (familiar melody, improvised lyrics);Validating; eye contact; matching | | Stimuli (singing): Use of Intentionality; Imitate | Line 20 XL doc. | providing spac |
| <i>Line 12-13 Transcript</i> | | <i>Visual Cue; Time</i> | <i>Giving good face; Pause; Follow persons lead</i> | | |
| <i>Line 14-15 Transcript</i> | | <i>Vocal Activity-sing connection</i> | <i>Stimuli - sing</i> | | |

Appendix 19: Sample Raw Data Correlations XL Sheet (#2.) Liam (Pg.4)

| | | | | | |
|-----------------------|--------------------------------------|--|--|--------------------|----------------------|
| Line 16 XL doc. | Matching (pulse, tempo and dynamics) | | Imitate | 22 | reflecting modelling |
| Line 16-17 Transcript | | Visual Cue; Gestures body language | Giving good face; Stimuli - gestures | Line 23 Transcript | |
| Line 20 Transcript | | Visual Cue; Time | Giving good face; Being available | | |
| Line 22 Transcript | | Visual Cue | Giving good face | | |
| Line 24 Transcript | | Visual Cue; Movement Activity - physical positioning | Giving good face; physical positioning and proximity | Line 27 Transcript | |

Appendix 20: Sample Raw Data Correlations XL Sheet (#2.) Liam (Pg.5)

27

Pause;
eye
contact

*Line 29
Transcript
Line 30
Transcript*

*Vocal Activity-
sing
Vocal Activity -
sing personalize
lyrics*

Pause; giving
good face

*Stimuli - sing
Giving good
face;
Sensitivity*

28

Modelling

*Line 28
Transcript
Line 30
Transcript
Line 31
Transcript
Line 33-
34
Transcript*

*Vocal Activ
Movement A
proximity; V
Gestures &
language
Visual Cue;
activity; Mo
Activity; Ti*

Appendix 21: Sample Raw Data Correlations XL Sheet (#2.) Liam (Pg.6)

| | | | | | | |
|----|---------|-------|-------------------|-------------------|---|----------|
| | | | <i>Line 35-</i> | | <i>Object/Inst.; Movement Activity;</i> | <i>P</i> |
| | | | <i>36</i> | | <i>physical proximity; Visual cue</i> | <i>C</i> |
| | | | <i>Transcript</i> | | | |
| | | | <i>Line 36-</i> | | <i>Vocal Activity - sing</i> | <i>S</i> |
| | | | <i>39</i> | | | |
| | | | <i>Transcript</i> | | | |
| 32 | Eye | | 41 | gestural/ musical | | <i>I</i> |
| | contact | | | cue | | |
| | | | <i>Line 43-</i> | | <i>Vocal Activity - sing</i> | <i>S</i> |
| | | | <i>44</i> | | | |
| | | | <i>Transcript</i> | | | |
| | | | <i>Line 45-</i> | | <i>Vocal Activity - sing personalized lyrics;</i> | <i>S</i> |
| | | | <i>46</i> | | <i>Copy</i> | <i>C</i> |
| | | | <i>Transcript</i> | | | |
| 34 | Pause | Pause | 48 | modelling | | <i>a</i> |

Appendix 22: Sample Raw Data Correlations XL Sheet (#2.) Liam (Pg.7)

| | | | | |
|----|---|------------------|----|-----------------------------------|
| 35 | Singing; validating and providing framework and structure | Stimuli; Imitate | 49 | shifting introducing change |
|----|---|------------------|----|-----------------------------------|

| | | | |
|-------------------------------|---------------------|-----------------------|-------------------------------|
| <i>Line 36 Transcript</i> | <i>Time; Change</i> | <i>Pause; Stimuli</i> | <i>Line 51 Transcript</i> |
|-------------------------------|---------------------|-----------------------|-------------------------------|

| | | | |
|----------------------------------|---|-----------------------------|-------------------------------|
| <i>Line 38-39 Transcript</i> | <i>Visual; matching environment</i> | <i>Intriguing/curiosity</i> | <i>Line 52 Transcript</i> |
|----------------------------------|---|-----------------------------|-------------------------------|

| | | | |
|-------------------------------|---|---|------------------------|
| <i>Line 44 Transcript</i> | <i>Movement Activity - physical positioning</i> | <i>Physical positioning and proximity</i> | <i>Line 54- 55</i> |
|-------------------------------|---|---|------------------------|

Appendix 23: Sample Raw Data Correlations XL Sheet (#2.) Liam (Pg.8)

| | | | | | |
|----------------------------------|---|---|---------------------------------------|---------------------------------------|--|
| <i>Line 47 Transcript</i> | <i>Movement Activity- physical positioning and close proximity</i> | <i>Physical positioning and proximity</i> | <i>Line 56- 57 Transcript</i> | | <i>Vocal Activi</i> |
| | | | <i>Line 58- 59 Transcript</i> | | <i>Movement A physical acti Actiivty - sin</i> |
| <i>Line 47 XL doc.</i> | <i>Copying</i> | <i>Imitate (copying)</i> | <i>61</i> | <i>modelling</i> | |
| <i>Line 48-49 Transcript</i> | <i>Time; Sense of Anticipation</i> | <i>Pause; Anticipation</i> | <i>Line 61- 62 Transcript</i> | | <i>Movement A physical acti</i> |
| <i>Line 50-53 Transcript</i> | <i>Movement Activity- physical positioning and close proximity; Vocal</i> | <i>Physical positioning and proximity; Chiming in</i> | | <i>Line 63- 64 Transcript</i> | |

Appendix 24: Sample Raw Data Correlations XL Sheet (#2.) Liam (Pg.9)

| | | | | | |
|-------------------------------|--|------------------|------------------------------|-------------------|-----------------------|
| 52 | Singing; validating and matching | | Stimuli; Imitate | 64 | space |
| <i>Line 55 Transcript</i> | | <i>Time;</i> | <i>Pause;</i> | <i>Line 64-</i> | <i>M</i> |
| | | <i>Vocal</i> | <i>Intriguing/curiosity</i> | <i>65</i> | <i>A</i> |
| | | <i>activity</i> | | <i>Transcript</i> | <i>G</i> |
| <i>Line 56 Transcript</i> | | <i>Vocal</i> | <i>Stimuli - exaggerated</i> | | |
| | | <i>activity</i> | <i>vowel sounds</i> | | |
| <i>Line 65 Transcript</i> | | <i>Vocal</i> | <i>Stimuli - sing; Pause</i> | <i>Line 65-</i> | <i>V</i> |
| | | <i>activity;</i> | | <i>66</i> | |
| | | <i>Time</i> | | <i>Transcript</i> | |
| 65 | Imitate | | Imitate | 66 | modelling; singing |
| | | | | <i>Line 67-</i> | <i>R</i> |
| | | | | <i>68</i> | <i>T</i> |
| | | | | <i>Transcript</i> | <i>C</i> |
| | | | | <i>Line 69-</i> | <i>V</i> |
| | | | | <i>70</i> | <i>sin</i> |
| | | | | <i>Transcript</i> | <i>O</i> |

Appendix 25: Sample Raw Data Correlations XL Sheet (#2.) Liam (Pg.10)

| | | | | |
|-----|--|--|-----|--------------------------------------|
| 72 | Matching; Validating | Imitate | 75 | reinforcin |
| 104 | Shifting to different instrument; copying rhythm and tempo | No object/instrument; Imitate | 108 | gestural re after visua |
| 107 | Shifting of rhythm and tempo to slow | Initiate (introducing change) | 112 | Pacing; Empatheti Improvisa |
| 112 | Intervening; Contrasting tempo, melody and timbre | Initiate (introducing change); stimuli | 150 | Shifting |
| 123 | Waiting/Pause | Pause | 154 | Imitation/ Close eno mirroring |
| 128 | Accompaniment instrumental and vocal (singing) | Giving good face; stimuli | 168 | Accompan |
| 157 | Gestural cue | Physical cue | 179 | Incorporat |
| 179 | Structure & Familiarity in song | Giving good face; stimuli | 200 | Modulatin Incorporat |

Appendix 26: Sample Raw Data Correlations XL Sheet (#2.) Liam (Pg.11)

| | | | | |
|-----|--|----------------------------------|-----|--|
| 230 | Probing | Use of spoken language | 206 | Accompaniment |
| 235 | Copying; Incorporating | Imitate; taking cues | 223 | Intervening |
| 294 | Incorporating (imitation) ; matching and mirroring | Imitate; Following person's lead | 252 | Musical communication |
| | | | 255 | Intervening |
| | | | 262 | Intervening |
| | | | 282 | Modelling |
| | | | 292 | Singing - and structure familiar songs |