MUSIC TECHNOLOGY IN MUSIC THERAPY

A study of the possibilities, potential and problems around the use of music technologies in music therapy with youths and adolescents

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Abstract

Music technology in music therapy **-** *A study of the possibilities, potential and problems around the use of music technologies in music therapy with youths and adolescents.*

This qualitative study explores the usefulness of music technology in music therapeutic practice with youth and adolescents. Four music therapist`s reflections on their use of music technologies and on the possibilities, potential and problems of this use are explored through semi-structured interviews. In this hermeneutic study, theoretical perspectives from music sociology and music therapy are presented as a framework for the empirical explorations. This thesis explores music technology as physical objects and non-physical concepts in the context of working with youths and adolescents, how this applies to their identity development in a socio-cultural environment and how music therapists can use this knowledge to better engage with and assist these clients in music therapy. Several trends enlightening both positive and negative consequences of the use of certain technologies are discussed.

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Bergen, May 2013   René Misje

1.0 Introduction

1.1 Personal Background

In this master thesis, I have approached a theme that has been very important to my own engagement in music for many years. Music technologies is very important on how I approach music in general, whether it is listening to music using mp3 players, computer, cd, vinyl, experiencing the amplification it provides when attending concerts, playing music on my electric guitar with all my stomp boxes through my amplifier or recording songs to my computer. In my own experience of using music technology, I have noticed how the technology (e.g. computer studio, guitar effect pedals) changes how I approach the instrument plugged into it. Having myself limited vocal skills, I managed to create new sounds and give myself a peak experience by singing into a microphone plugged into an octave and delay pedal. If I can experience this, there must be many potential clients who can have the same experience. To prevent an asymmetric relationship from occurring between the therapist and client, the use of music technologies might be useful in this interaction and improve the therapist's relational skills in acknowledgment, reciprocity and affect attunement towards the client. I used this as a starting point for my research process.

After having practicum placements working with youths and adolescents in a broad specter of music therapy fields e.g. child protective services, children and youth psychiatry, special needs school and in asylum centers, I chose to use some of my practicum teachers, lecturers and fellow students as informants. Having this practical experience as a student, I felt that I had a better understanding of how my informants worked when having seen them "in action". But what I did not know was their thoughts about how their work reflected on the possibilities, potential and problems around the use of music technologies in music therapy practices. Having had four different practicum placements working with youths and adolescents, I chose to focus on music therapists who worked with this client population and could find themselves in therapist/client interventions where the use of music technology could be applicable.

1.2 Music therapy: towards a more technological-oriented music culture

To contextualize my thesis it must be taken into consideration that the interest for popular culture and popular music has grown in the field of music therapy. So to give an account of developments in music therapy that focus on music technology I am also focusing on cultural and social orientations.

Ruud (1997) discusses the relation between identity, music and affiliation. This is interesting in the context of enlightening the possibilities to use music technology in music therapy to create an alternate self-image and experience a *"third dimension"* (Gruchot, 2009) through music. According to a musicological and ethno musicological view, the role of using music technologies in music therapy can be to create new musical experiences that create starting points for identity work, hence it is the musical experiences and not the music itself that is the basis for this (Ruud, 1997, p. 10). For some clients, using music technology methods will enable them to reach peak experiences in music otherwise not possible for them with the use of traditional instruments and methods. In view of empowerment and resource-oriented theory (Rolvsjord, 2010), this can be a way of affording music technologies with these properties to enforce these aspects of music therapy in practice. Rolvsjord (2010, p. 58) writes about the importance and relevance of the correlation between musicology and music therapy. Her thoughts about the necessity of exploring literature on the field of musicology to reflect on ontological questions of the concept of music in relation to the role of music in resource-oriented music therapy is relevant for this thesis. Rolvsjord`s (2010, pp. 60-61) discussion about music as an autonomous object is something that is interesting when studying the correlation between music and music technology. But this is problematic within the field of music therapy since the effectiveness of music is viewed as a part of larger interactive encounters whereas in traditional musicology[1] there are tendencies of perceiving music as synonymous with a musical work that contradicts with music therapy philosophy in relying only on the properties of the specific music. But the character of music itself can be viewed as an object that is related to aesthetics and the qualities the listener affords the music with, and this view can be useful in music therapy. Aigen (2007, p. 127) argues that "aesthetic experience involves and models processes of transformation that are necessary parts of successful music therapy." These processes can be the transformation of musical materials and musical elements that can become the transformation of the client's self. Ruud (1998, p. 13) experienced that children could be engaged in musical activities for learning and cognition when they had acquired a musical code or competence. On the basis of musicology literature, this concept of meaning and expectations of music transferred to music therapy when they managed to trigger musical initiatives or responses in the children necessary to establish communication through improvisation. In the context of this thesis, music and music

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[1] There is a lot of musicology literature that is not concerned with the specifics of the musical works itself.

technology can be viewed as "an object that we act toward in order to make obvious our values and our actual position in culture" (1998, p. 37).

Ruud (1998, p. 101) also states that music therapy research on measurable effects of music has led to the neglect of questions about the aesthetics of music. Aesthetics is an important aspect of how we use instruments and technologies when we are making and playing music, it changes how we play and perceive the sounds we are hearing. Stige (2002, p. 181) emphasizes how aesthetics focuses on the questions and theories of a) the nature and meaning of art, b) beauty and the sublime, c) taste and value, and d) sensory experience coupled with feeling, all of which are important aspects of how music therapists relate to their clients in music therapy. How clients find meaning and value in their music are valuable aesthetics they bring into music therapy.

Turning to popular music, musicological and ethno musicological theory and literature, which enlightens the role of music technology in modern culture and society and highlights the power, influences and proliferation around the globe of the sounds of technology in music, there are correlations that links the fields of musicology and music therapy together. Exploring how music therapy could benefit from the use of music technologies I found it interesting when Waksman (1999) quotes Attali saying; "(…) using the instrument as a device that might lead the way toward new modes of musical perception and understanding" (1999, p. 11). Waksman says that the use of technologies in music will open up for; "a new system of combination, creating an open field for a whole new exploration of the possible expression of musical usage" (1999, p. 12). In this thesis I am also looking at how the use of music technology can be useful for clients in finding ways to express themselves in music therapy in ways they had not been able to without music technology.

To understand the correlation between music and culture Middleton, Herbert, and Clayton (2003) point at how we understand music and how this raises the question about the status we are willing to grant music. They introduce the term musics, meaning that music exist as musics, diverse, multiple, and unknowable within a single unitary framework. This further leads me to the theory that musics only can make sense as musics by resonating with the histories, values, conventions, institutions, and technologies that enfold them (2003, p. 19). In the view of my thesis this is relevant because music therapy view music as a part of larger interactive encounters as mentioned earlier.

The use of music technology is often associated with certain genres of music such as; rock, electronica and hip hop. To delve into the theories and challenges we meet in today's society when working with youths and adolescents, we need to understand the culture they are a part of. In discussing youth and sub cultures, Huq (2006) investigates the underground phenomena of music of the 21st century. He explores the technological advances in modern time; "Even the spread of communication technology and consumer durables have been contributing factors of shifting functions of the home" (2006, p. 26). This points towards that there is technology all around us all the time. And more importantly, there is music technology in the homes and leisure spaces of the youths and adolescents.

Kirk, Hunt, Hildred, Neighbour, and North (2002) ask an important question; Why use music technology in music therapy? They say that with the use of music technology in music therapy, you can produce new timbres and sound worlds, which are not available in acoustic instruments. I am looking to see if my research will show that it is not necessary to implement a whole new range of instruments to the therapist's ensemble, but rather to assist and supplement what that is already there. This will open up for new genres of music, which for some clients will enable them to engage in improvisations and other musical activities otherwise not possible (2002, pp. 1008-1009).

A term that needs further exploration and investigation is the term technology in music therapy. Krüger (2007) writes about the concept of technology in music therapy and he focuses on Streeter (2007) who writes about how technology often is looked upon purely as a physical object. Krüger comes with an interesting approach to where technology transforms into human activity and links material and social worlds, or physical to non-physical things. This relates to Ruud (1998) and his thoughts about the social self. He refers to Erikson who says that, "The conscious feeling of having a personal identity is based on two simultaneous observations: the perception of the self sameness and continuity of one's existence in time and space and the perception of the fact that others recognize one's sameness and continuity" (Erikson 1968 p. 50 in Ruud, 1998, p. 38). So to see, be seen, to hear and be heard on equal terms are essential when combining music and identity.

The opportunity to create new and unconventional musical compositions and experiences in music therapy, can give clients the ability to experience empowerment, which is a field that is very important in Norwegian music therapy theory. Rolvsjord (2010, pp. 39-40) divides empowerment into several levels. At the individual level, the concept of psychological

empowerment is where changes in behavior, cognitions and emotions can happen. Also "believing in one`s competence efforts to exert control and an understanding of the environment, the ability to act and participate as well as the feeling that one has the right to do so" (2010, p. 40) is central to empowerment and a part of this level. Other dimensions of empowerment could be intrapersonal, interactional and behavioral. At the intrapersonal dimension you find aspects such as self-esteem, self-efficacy and a belief that you can control events that affect you. The interactional dimension describes people`s use of their analytical skills to influence their environment and the behavioral dimension describes how the individual takes control by participating in the community.

1.3 Clients: youths and adolescents

Music technology plays a significant role in contemporary youth culture. When working with youths and adolescents in music therapy music therapists are very likely to meet clients who are using music technology in their approach to music. The youths and adolescents subjective experience of the meaning of music are often the focal point for how music therapists work with these clients in Norway (Johns et al., 2009). In working with adolescents and rock music, Tervo (2005) tells the story of a young male's experience of playing the electric guitar; "While playing fast, heavy rock music on an electric guitar, he was able to revel in his ability, his fantasies of omnipotence and his wish to become skillful and admired. Identification with the music therapist helped him to cope with his feelings of insignificance and of being only a beginner in playing instruments" (2005)[2]. With Winnicott`s (1971, p. 5) description of the early childhood *transitional phenomenon* and *transitional object*, a word or a tune can be used to go to sleep and as a defense against anxiety. In view of this the music or musical instrument can serve as such an object. Ruud (1997, p. 94) says that the healthy development of a self-image is correlated with the ability to receive, persevere and process those feelings that occurs, also in situations that contains dramatic elements that cannot find its solution in the real world. And in those situations the fantasy can help us to create symbolic solutions. Looking at how youths and adolescents are using music technology in their daily life, we can see that music and technology plays a major role in their development of gender identity and behavior (Skarpeid, 2009). With this in mind, it becomes clear that to help this group of clients better in a therapeutic setting, it can be useful for the music therapist to have knowledge and skills about handling music technologies.

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[2] Found under the headline: Fantasies of Omnipotence, section 2

1.4 Music Technology in Music Therapy: a literature review

Traditionally music making in music therapy involves conventional acoustic instruments such as the piano, guitar, and in particular pitched and non-pitched percussion instruments (Magee, 2006, p. 140). By plugging a guitar into a guitar pedal, e.g. delay, the instrument is changed and so is the musical experience. You can easily create big roaring sounds, even though you are barely touching the guitar strings. This technology can be applied to any traditional acoustic or electric instrument.

Another way to apply technology to musicking is by using the effects as instruments, and in this way new instruments are created. This will offer music therapists alternate ways of approaching music making. This has been demonstrated with the new generation of assistive music technologies when working with clients with profound physical or multiple disabilities (Magee, 2006, p. 140). Applying technology to music, and especially digital technology, to music therapy practice is a phenomenon that has become more common during the last 10 years. In the early 1980`s, computer based technology in music therapy was mainly used to collect and analyze behavioral interactions that were observed in clinical treatment and music therapists also used computer-assisted charting software such as SCRIBE, AIMSTAR and EMTEK.  From the late 80`s and early 90`s, computer software was mainly used in order to transcribe music therapy improvisations for the purpose of analyzing the musical elements of the client/therapist interaction. In the mid 1990`s, AMTAS, a computer aided music therapy analysis system that organizes data collected from audio and video recordings of music was developed to track the physical activity of clients engaged in musical improvisation over a selected time interval and then to compare progress over sessions. By 2010, there were several new software programs that were developed by music therapists. The last decade, assistive devices such as switches and control devices has been more common to use in music therapy with people with physical disabilities (Hahna, Hadley, Miller, & Bonaventura, 2012, pp. 456-457).

The use of music technologies has played an important part of making music, or, changing music for some sixty years and technology can help bring forward a "third dimension" otherwise hidden in the traditional ways of using instruments in music therapy. This third dimension can be described as new ways of playing and experiencing music and musical instruments in music therapy. The use of music technologies can help a client trigger and explore new musical ideas and experiences (Gruchot, 2009). Kirk, et al. (2002) explore how music technology in music therapy offers a "blank sheet of paper" in terms of the

construction of musical timbre, and the means of interaction with sound. Specifically, it offers the opportunity to decouple the nature of gestures used in music performance from the resulting sound in a way which is not possible with conventional acoustic instruments" (2002, p. 1008). They also discuss the potential around the use of technologies:

> "The value of electronic instruments lies in the ability to build or adapt instruments for individuals, not everyone can play a piano or drum. The new sounds have different dynamics, which open up exciting possibilities, especially for those with difficult associations with tonal music. The use of electronics provides also provides opportunities for quantitative evidence of practice by recording the signals produced by the electronics during performance. In fact, the new instruments provide such an open range of possibilities in gesture and sound that the major problem may lie in our (lack of) imagination and experience in the way in which they may be used." (Kirk, et al., 2002, p. 1009)

Electronic instruments can enable clients to play music and also provide music therapists with useful ways of recording and reading musical empirical data. Also they highlight how preconceptions of the limitations of electronic instruments can be challenged by exploring new ways of using them.

1.4.1 Assistive technologies

The use of assistive technologies and instruments is well documented in music therapy literature. Assistive instruments such as the *Sundbeam,* that allows the most minimal movements to instigate and shape interesting sound effects, trigger rich and exotic aural textures, or effect soaring improvisations (Swingler, 2002, p. 1682). *MidiGrid* allows the users to trigger musical material in real-time using the computer mouse (Hunt, Kirk, & Neighbour, 2003, pp. 3-4). They approach music technology in music therapy with the attitude that:

> "Clients who have physical or mental difficulties can challenge music therapists, due to the client`s lack of the requisite physical and cognitive skills typically required to play conventional instruments. Music technology can give people access to music (and thus to music therapy) by providing a means of transducing limited physical gestures into musical expression." (Hunt, Kirk, & Neighbour, 2004, p. 50)

By doing interdisciplinary research, a number of new instruments, devices and ways of thinking emerged. Using music technology, they found ways of producing new timbres and sounds with stimulation possibilities for musical improvisation without the constraints of traditional acoustic instruments and musical rules about harmony. Their way of thinking aimed including people who were otherwise put off by traditional musical instruments and the music those instruments affiliated with. Hyper instruments, easy-to-learn, inexpensive, tactile

and fun-to-play instruments were created with the idea to eliminate the need for years of practice and immediately being able to play music.

> "The goal should be to develop a comprehensive set of musical, neurological, and behavioral tools and techniques to investigate whether (and, if so, under what conditions) musical activities are associated with enhancements and improvements in memory, concentration, pain management, anxiety, stress, and creative imagination. We are focusing especially on technologies that enable people, at any level of physical or mental ability or disability, to express themselves musically." (Machover, 2004, p. 175)

Camera-based technologies that allows physically impaired clients to naturally create music with no prior musical training such as; *Music Maker, EyesWeb, DanceSpace, STEIM's BigEye system, Handel, Camera Musicale, the Camera Mouse, The Vicon 8 Motion-Capture System, Musical Gestures Toolbox, pureCMusic library, The Kontrolldress, BodySynth and The MidiDancer* (Gorman, Lahav, Saltzman, & Betke, 2007, pp. 41,50), have been designed for people who found that "playing an instrument, such a piano, guitar or drums, may be very difficult or even infeasible for patients with motor dysfunctions" (2007, p. 39). The goal of these instruments has been to design exercises to improve measures of motor function and hand-eye, foot-eye, or bi manual coordination.

In a Wiimote-based instrument using the Wii Game technology, they found that the therapeutic effect for children with behavioral disorders was found in the performance, and not in the music. The experiment was successful in capturing the children's sense of self-esteem, technology and capability (Benveniste, Jouvelot, & Renaud, 2009, p. 3).

Stensæth and Ruud (2012) present the RHYME[3] project with the article "Interactive Health Technology - new possibilities for music therapy?" They included music therapists, information theorists, designers and composers to join forces to develop new music furniture where the interaction design plays a significant role. Particularly interesting for this thesis is their focus on what "instruments" in music therapy can afford users and the development of a philosophy of instruments in music therapy based on reflection on the use of traditional analogue audio sources and the development of a new interactive music technology. Together they examine how the interaction with a new type of interactive digital music furniture can have health benefits for some disabled children and that people with or without extensive disabilities can create something through contact with and use of information and communication technology based things called co-creative tangibles. The intention is to

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[3] More information can be found at www.rhyme.no

motivate people to play and work together, to co-create (2012, p. 6). They found that the two children they studied using these instruments called ORFI[4]; "got in contact with themselves, the feeling of a subjective self, and that this gave them an experience of mastering, achieving contact with other objects and others/intersubjectivity, expressing and developing a relation to objects and others, and could share experiences/interaffectivity" (2012, p. 15).

1.4.3 A broader view on technology

Today, with the explosion of e.g. Apple computer products (iPhone, iPod, iPad, iMac, MacBook's etc.) in particular, technology and music has been interwoven in our everyday life in a way that we have not seen before. The everyday music listening and utilization of music technologies has changed how we use, play and perceive music. The implementation of everyday technologies such as mp3 players and computers have been implemented more in music therapy practice in recent years, especially in practices working with young and adolescent clients both in group or individual therapy sessions and adapted as self-regulation strategies by clients (Aigen, 2005; DeNora, 2000; Kolstad, 2008; Krüger, 2009; Ruud, 2005a; Skånland, 2009; Skarpeid, 2009).

Some music therapists do not want to or need to use music technology in their clinical work. Music therapists have implied regarding the use of music technologies is music therapy, that technology can be physically encumbering, artificial, does not allow for basic music expression in terms of volume and timbre and put up more barriers between the client and therapist. Technology can come in the way for the human to human interaction and make the therapist miss some of the client subtleties in the interactions and reactions to musical objects that are acoustic and natural (Hahna, et al., 2012). Crowe and Rio (2004) explored the particular importance of technological applications to music therapy practice. Two key elements to why students in music therapy education should be educated in the use of music technology came out of this research (2004, p. 283);

- There is a general proliferation of technology in studying, learning, recording, and composing music, in medical practice and research.
- Serving the needs of individuals with disabilities.

In the context of this thesis I think that Crowe's (2004) first element not only applies to medical practice and research, but also to the rest of our culture and society. The lack of

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[4] The prototype for the first generation of music furniture.

literature on how to train music therapy students in the clinical use of music technology has been noted in more recent literature also (Hahna, et al., 2012, p. 456).

A relevant question regarding the use of instruments in music therapy is; "Are music therapists taking advantage of electronic music technology, or are they locked into a backward-looking tradition which unnecessarily limits clients to a restricted sound repertoire?" Swingler (2002, p. 1679). Music technology is ignored by many music therapists regardless of the ability music technology has to invite "non-musicians" to participate in musical dialogue. Another key question about the instruments used in music therapy can be; "What does it sound like? What kind of personality does the instrument have?" (2002, p. 1680). Instruments are linked to personality and can then be a process of meeting the client as an individual. This also raises the question if the traditional percussion instruments (shakers, drums, scrapers etc.) used in music therapy, respect the physical dexterity that is required to access the limited palette of sounds available in them? (2002, p. 1680).

In music therapy literature regarding the use of music technology, it seems to be an overall goal to make it possible for the client to realize a creative idea without "the traditional prerequisites of instrumental profiency or formal training" (2002, p. 1682) regardless of the specific implementation and use of technology and client demographic. This can give them opportunities to have aesthetic experiences. Aigen (2007) underlines the value of such experiences:

> "Aesthetic experience provides a connection to a fundamental reality that exists outside the individual and of which he takes part. All people have a need to feel a part of something larger than them selves. Typically, this can involve identification with a family group, a profession, a religion, a nation, or some other values-based community. Many music therapy clients, particularly those residing in some kind of institutional community have limited or no opportunities to create connections to these aspects of social life. Aesthetic musical experience is a link to the patterned realities of both the natural and the social worlds that allow all who partake of them to feel part of something larger than themselves, something that is both within them and without." (Aigen, 2007, p. 126)

1.5 Research Question

There was a number of different ways of using music technology in music therapy that I would like to study when I started this project. I chose to explore which role music technology can have for music therapists in their practice working with youths and adolescents. I found this approach very interesting since I was close to finishing my studies myself and wanted to do a research project where I could benefit from exploring the

possibilities, potential and problems around the use of music technologies when I was going to go out and work on my own. Based on the experience I acquired from my different practicum placements I have become very interested in working with youths and adolescents. This was the basis for my research question:

How can music technologies help music therapists to engage with and assist clients in the therapeutic process?

For this thesis the term music technology entails both physical things and non-physical concepts. Physical things included are e.g. electric instruments, amplified instruments, computers and software, switches and assistive devices and all other advanced and portable recording technologies. The non-physical concepts belong to a broader definition of technology that includes concepts like learning, culture and identity.

1.6 Disposition

I started this thesis with some reflections about what music technology has meant to me through my own experiences and my view on the role music technology can have in music therapy. Then I looked at how music therapy fits into the context of a more technologically oriented music culture before I introduced the client group I am focusing on in this study. Further I did a literature review focusing on music technology in music therapy practice before I presented the problem. In the next chapter I will discuss the methodological considerations of this project and present my informants. This leads to my analysis where I present relevant theoretical literature and the empirical data. After this I have a chapter where I discuss the key findings leading into my final conclusion for the thesis.

2.0 Method

Hence I wanted to investigate how music therapists experience the use of music technology, I chose to interview four music therapists that worked with young and adolescent clients within a variety of employment situations in Norway.

2.1 Qualitative Method

To place my study in the qualitative research tradition, I need to clarify what separates the qualitative and quantitative method. According to Patel and Davidson (2003, p. 13), it is that "quantitative oriented research is research that uses statistical methods for processing and analysis. Qualitative oriented research is research that uses verbal methods of analysis." Wheeler and Kenny (2005, p. 59) explain that qualitative research also has an overall goal, which is the discovery of meaning and the desire to locate and describe it in a variety of contexts in an increasingly complex world. This also makes qualitative research an intensely human act. I, as a researcher, become important in the development of the research itself. This emphasizes the choice of the qualitative method; hence the meaning of my research is assigned in human terms within contexts of experience as a human being. Ruud (1998, p. 103) says that qualitative research is the search for meaning and significance in psychological phenomena. This relates to the purpose of my research to find out more about my topic in regard to the therapist and client interaction.

2.2 Hermeneutic approach

Hermeneutics is the art of science and interpretation of texts and the gaining of new knowledge through this method. In essence, in hermeneutics "the meaning of a part can only be understood if it is related to the whole" (Alvesson & Sköldberg, 2009, p. 92). Then, to understand the whole, you need to understand all the different parts as well. To understand the parts in this study I need to consider my own reflexivity, my informants and the theory I am using to reflect upon and develop my empirical data. This is called the hermeneutic circle (2009, p. 92). Such a process of a hermeneutic circularity or spiral (2009, p. 92) is fundamental to my research process. In the analysis I began with one part and tried to relate it to the whole, upon which new light was shed, and from there I returned to the part studied and so on. I started at one point and delved deeper and deeper by alternating between the part and the whole to get a broader understanding of both (2009, p. 92). This process started as early as when I conducted the interviews when I reflected on the answers given by my informants and responded with follow-up questions within the frame of the semi-structured interview set for

this study. In hermeneutic theory, this is called an objectivistic hermeneutic approach. This results in "the understanding of underlying meaning, not the explanation of casual connections" (2009, p. 91).

Another aspect of hermeneutics is that the interpretation of understanding has been increasingly linked to *empathy:* understanding calls for living (thinking, feeling) oneself into the situation of the acting (writing, speaking) person (2009, p. 93). Music therapy is a field of practice in which this applies itself to the discourse, and is therefore very relevant in the way I conducted my research hence I am interested in finding out how my informants relate to their clients in music therapy. This also places my research under a Naturalistic/Constructivist paradigm of research. Lincoln and Guba (1985 in Wheeler, 2005, p. 62) have five points for explaining this paradigm in relation to a positivistic paradigm.

1. Nature of Reality
   a. There are multiple realities that can be studied only holistically.
2. Relationship of Knower to Know
   a. The inquirer and the object of inquiry interact to influence each other.
3. Possibility of generalization
   a. Only time- and context-bound working hypotheses are possible.
4. Possibility of Casual Linkages
   a. All entities are in a state of mutual simultaneous shaping, so it is impossible to distinguish causes from effects.
5. Role of Values
   a. Inquiry is value-bound.

I chose to include this because it clarifies the human nature of my study. Positivism argues that society operates according to general laws like the physical world and that there is a single, tangible reality that can be broken apart into pieces that can be studied independently whilst a Naturalistic/Constructivist view entails that there are multiple realities that can only be studied holistically. Ruud (2005b, p. 36) also explains that the hermeneutic research tradition is the opposite of positivism, hence positivism is seen more as a fit for the natural sciences than for the human sciences. In music therapy research, the music therapist is more interested in the understanding and interpretation of creative musical processes, personal narratives, and of cultural contexts framing the therapeutic processes. This hermeneutic approach applies to the investigative process I am in as a researcher and can unfold stories to reflect upon and enlighten the topic I have set out to investigate through the interviews of my

informants. This can also be understood by how Kvale and Brinkmann (2009) discuss the two metaphors of being a *miner* or *traveller,* to portray the interviewer. These metaphors illustrate the different epistemological perceptions of the interview process as acquisition and knowledge construction. The *miner* metaphor, regard knowledge as buried metal and the interviewer as a miner who wishes to retrieve the valuable metal. The interviewer acquires knowledge through interviewing a person who is unaffected by the interviewer. The *traveller* metaphor views the interviewer as a traveler who constantly seeks new knowledge on his journey, and is open for the possibility of changes along the way. The journey could lead to new knowledge but also contributes to reflection and contemplation, which may lead to new insights for the interviewer. These two metaphors represent two different ideals of interview knowledge as either given or designed for the interviewer. I placed myself as a researcher under the metaphor *traveller* because each interview would be different and provide me with different angles to reflect on my research question and interview guide.

2.3 Qualitative research interview

According to Kvale and Brinkmann (2009, p. 30), the qualitative interview aims at "nuanced accounts of different aspects of the interviewee`s life world; it works with words and not with numbers." This way the qualitative interview covers both the factual and the meaningful level. The meaning might just as well be found "between the lines" or in the explicit descriptions and meanings that are expressed. The interviewer can seek to "formulate the implicit message, "send it back" to the subject, and may obtain an immediate confirmation or disconfirmation of the interpretation of what the interviewee is saying" (2009, p. 30). If my informant said something I needed he/she to explain further for me to fully understand them, I asked the informant to explain more concretely, elaborate or answer a question regarding my own interpretation of their answer. Kvale (2001, pp. 91-92) says that the researcher him/herself are a research instrument as an expert on interview topics, human interaction, continuously makes quick decisions between what to ask and how, and chooses between which answers that are to be interpreted or not. The interviewer should also have good knowledge about the research topic at hand, master conversations skills, be linguistically proficient and have an ear for interview person`s language style. The interviewer should also have a sense of good stories, and be able to help the informant to express their own stories.

2.3.1 Semi Structured Interview

Kvale and Brinkmann (2009, p. 27) call the semi structured interview a life world interview that "attempts to understand themes of the lived everyday world from the subject`s own

perspectives" and that it "seeks to obtain descriptions of the interviewees lived world with respect to interpretation of meaning of the described phenomena." It is not an everyday conversation, but it has a purpose and involves a specific approach and technique, and is therefore a professional interview.

I set up my interview guide[5] with questions that would help me to acquire as much relevant information from my informants as possible regarding my research topic. My interview guide functioned as a checklist to make sure that I covered all topics necessary to complete my research. The informants were allowed and encouraged to elaborate on their answers and reflections. This way new information could emerge and we could have a dialogue in the interview process where new topics could be discussed. In this process, the interview guide functioned as the framework that would lead the interview in the way I had planned. This way all of my planned topics would be discussed in the interview process.

2.3.2 Informants

I included four music therapists (two male and two female) currently working with youths and adolescents to participate in my study. I chose informants who have used music technology in different degrees and that have a varied experience with technology. I also tried to include a variation of institutional contexts. I have chosen representatives from both genders to explore the possibilities of getting both views on my topic, and to explore gender as a necessary element to include in my research. My informants represent the population, (purposive sample) or the larger group of those I wish to apply my findings to in terms of gender, occupation, age and geographic affiliation (Wheeler, 2005, p. 113). I wanted to talk to informants who could provide me with varied and wide insights in terms of experience, gender, client demographics, social, political and methodological aspects of their practice.

In agreements with the informants, they are not anonymous but presented by full name.

Grete Skarpeid works at the Child and Adolescent outpatient ward (BUP) at Voss Hospital. She finished her music therapy education in 1985 at Sogn & Fjordane University College and finished her Masters degree in Music Therapy in 2008.

Åsta Knutsen works at the Centre for Music Therapy at the Culture School in Bergen. She finished her Music Therapy training in 1997 at Sogn & Fjordane University College and

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[5] Appendix 1

finished her Masters degree in Music Therapy in 2012 at the Grieg Academy at the University of Bergen.

Viggo Krüger works with youths and adolescents within the child protective services at Aleris Ung Plan in Bergen. He finished his music therapy training in 1997 at Sogn & Fjordane University College and his Master in Music therapy in 2004. He finished his PhD in Music Therapy in 2012 with the qualitative study of young people`s perspectives on participation in community music therapy practice in child protective services.

Ian Kolstad works with youths and adolescents at Stord Culture School. He finished his Masters degree in Music Therapy in 2008 at the Grieg Academy at the University of Bergen.

With this information in mind, my informants can give me information about how, or if, music therapy practice has changed over the time period of 22 years in regard to the use of music technology. Patton (2002, p. 230) says that "information-rich cases are those from which one can learn a great deal about issues of central importance to the purpose of the inquiry, thus the term purposeful sampling." This further justifies my choice of purposeful sampling.

My research findings will not be representable as a generalizable truth. There are just four informants and includes according to Kvale and Brinkmann (2009, p. 171) too few subjects to make global generalizations. In my study the findings are of local interest in Norway, or more precisely Bergen where my informants and I are affiliated with the music therapy education at the Grieg Academy at the University of Bergen. The humanistic research tradition implies that every situation is unique and that each phenomenon has its own intrinsic structure and logic. This is in contrast to the positivistic methodology where the aim of social studies is to produce laws of human behavior that could be generalized universally (2009, p. 261). I can merely present my findings as documentation of my informant`s thoughts about my research question within the context of music therapy in Norway. The objective of this selection of informants was to get as many nuances as possible emphasizing on variety opposed to creating generalizability.

2.3.3 Conducting the interviews
The way I conducted the interviews was to visit my informants. My informants got the interview guide by e-mail prior to the interview when they received the letter of consent information. This gave them some time to prepare themselves. I believe that giving my

informants more time in contrast to just the participation in the interview setting to think about my survey questions, would give me more in-depth information for my research. I explained that I would conduct semi-structured interviews with them one by one at their workplace, and I estimated that each interview would take approximately 45-60 minutes. I informed them about the structure of my semi-structured interview method so that they knew that they were quite free in the way they were to respond to my questions and that I would record the interviews on a portable digital audio recorder.

My interview guide questions were influenced by the theoretical perspectives and objectives I had at the time when I started this research process. I divided the interview guide into two themes; *The use of music technology* and *Music technology's relationship to clients and issues of music therapy education in Norway*, with relevant sub questions to each theme. I conducted the interviews on four separate occasions and they were held at the informant's workplace since they were at work at the time we could meet.

The raw data I gathered with my interviews focused directly on the personal experiences and opinions of my informants. I used my interview guide as a template for the course of the interview, but also allowed for both the informants and myself to follow up on themes that occurred during the interview. I would ask follow-up questions when I thought they were talking about something that I found interesting and informative. The way I conducted the interviews was by trying to keep the level of conversation to an everyday way of conversing together. This was in an attempt to make the conversation flow as natural as possible. To know when to move on the next question, I interpreted the informants silence as a cue for that they were finished talking about the subject at hand. At the end of each theme I asked them if they had something to add to what we had already talked about and ended the interview with an open-ended question to let them add anything else to their interview.

2.3.4 Reflexivity

One bias that might influence my research is that I am pro music technology in music therapy. I am not convinced that the methods used in traditional music therapy in Norway are developing fast enough to keep up with the client`s skill level and knowledge about music technology within the fields of practice with youths and adolescents in particular. Aldridge (2005, p. 28) says that; "we need to recognize our own bias and that influences our work, that is, the process of reflexivity" and that "through such a process, and engagement in research, we begin to understand the world itself." The fact that it is me, René the musician, that is

doing this research, will affect it because of my own role as researcher with my preconceptions and why I am doing this study. Aldridge (2005) accentuates the challenge that the researcher who often is a therapist, has to switch between the modes of engagement and critical reasoning. To ensure quality assurance in the research process, Stige, Malterud and Midtgarden (2009) created a checklist called EPICURE. EPICURE offers an approach to research evaluation that encourages reflexive dialogue through use of an evaluation agenda. EPICURE is an acronym for **E**ngagement, **P**rocessing, **I**nterpretation, **C**ritique, **U**sefulness, **R**elevance and **E**thics. They say that EPICURE shifts the attention "from rule-based judgment to reflexive dialogue" (2009, p. 1504). Hence my own experience and reflections regarding the research topic, I have to have a conscious attitude regarding my own reflexivity in my research.

2.3.5 Transcribing the interviews

Through transcribing my interviews from oral to written form, I structured the interviews so that they were better suited for analysis. I recorded my interviews on a portable digital recorder and used QuickTime player on my laptop to play them back while I transcribed them. I conducted my interviews in Norwegian, hence I had to translate them into English. "To transcribe means to transform, change from one shape to another" (Kvale & Brinkmann, 2009, p. 178), and in this case I transformed the spoken word from one language to another into written texts. I had to make some choices regarding the Norwegian verbal style opposed to the English written style. I decided not to include pauses and phrases like *eh, ah,* etc. but I tried to keep the transcribed text as close as possible to the spoken style of the informants. When transcribing and translating the interviews some interpretation has been done from my side in adapting their spoken word into the text. I transcribed the interviews word for word but some citations are edited to some extent in the analysis chapter when the quote is "too verbal" and needed to be adapted to fit the written text, but the words and meaning of the quotes are still the ones of my informants. Transcribing my interviews like this made the empirical data easier to grasp and made me start the process of interpreting and analyzing already at this early stage (2009).

2.4 Data Analysis

In my thesis, the relationship between my empirical data and theory is examined in an abductive way, which has some characteristics from both an inductive and deductive approach. Induction is when one assumes that a connection that has been observed in between a number of single cases are generally valid. Deduction proceeds from a general rule and

asserts that this rule explains a single case. The abductive approach is, in relation to inductive and deductive research, the method of interpreting from a hypothetic overarching pattern, which, if it is true, should be strengthened by new observations or like in this thesis, case studies. Abduction is based on empirical facts just like the inductive approach, but it does not reject theoretical ideas and is therefore closer to the deductive approach. The abductive research positioning becomes a combination of both induction and deduction, but it also adds new elements and includes understandings (Alvesson & Sköldberg, 2009, pp. 3-4). As my empirical material includes therapists experiences of use as well as their expert opinions, the empirical materials is already "loaded" by theoretical perspectives. Consequently, I have not avoided theory in the process of analysis, but rather embraced the perspectives of understanding that a theoretical view might offer. The data is based on personal experience and expert opinions of the informants and the aim of this study is to get a closer understanding of these views. This study is based on empirical facts from semi-structured interviews conducted by myself and also includes theoretical views.

I analyzed my data by doing a thematic analysis of the data where I found my themes through a process of coding my interviews. The codes I applied to my empirical data lead me to the discovery of themes that occurred in all the interviews and then became unifying concepts for my analysis. I started by creating a table with three columns for each of the transcribed interviews. The first column contained the transcribed interview, the second column contained comments, interpretations and quotes that appeared during the interview, and the third column contained codes that said something about the main content in the first and second column. I then compared the four interviews and discovered that several of the codes dealt with the same issues that further led me to dividing my analysis into the different themes I ended up with. This way, I broke the text into manageable segments and attached keywords to a text segment in order to make the retrieval of that segment for my analysis easier (Kvale & Brinkmann, 2009, p. 323).

I wanted to keep my themes as close as possible to my research question and to explain the themes that emerged from analyzing the empirical data, I mainly refer to Bruscias (1998) definition of music therapy:

> "Music Therapy is 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." (1998, p. 20)

This definition helped me organize my themes in a way that made them more closely knit to the field of music therapy. The way Bruscia reviews music therapy in his definition, made it easier for me to make my themes clearer in terms of using a way of looking at music therapy that already is very well established in the music therapy discourse. In one way my themes was inspired to be a little bit pre-determined. But the way I use his definition in my text also differs from the conceptualizations in his definition.

Three of my informants have published work that I used in my theoretical reflections on the empirical data collected through the interviews and in my literature review. These texts are treated in the same manner as all the other texts I have chosen to include to enlighten the field I wish to study and the empirical data that I retrieved from doing the interviews.

2.5 Ethics

I had the participants sign a letter of consent[6], where they got all the information about the overall purpose of my research, main features of the design and possible risks or benefits of participating. Informed consent also means that I got the informants to participate voluntary and informing them of their right to withdraw from the research project at any stage.

They were also informed of the purpose of the procedures of my research project including confidentiality, who can access the survey material and my right to publish the whole or parts of the survey and the informant's rights to access the transcription and the analysis of the qualitative data. In regards to confidentiality, the participants were informed of that the information I publish is recognizable to others and to agree to the release of such identifiable information (Kvale & Brinkmann, 2009, pp. 70-72). The fact that they are not anonymous in this study, was based on the premise that their voice in the interviews should be made recognizable so they can be credited with their name for their contribution to this study (2009, p. 73).

Since I distributed the questions to my informants by e-mail, I had to report my research to the Norwegian Social Science Data Services, NSD [7] ("Norsk Samfunnsvitenskapelige Datatjeneste," 2011).

Another aspect of my study is the anonymity of my informant`s clients and being conscious in my description of the third party in relation to my informants. I knew some of the clients

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[6] Appendix 2
[7] Appendix 3 - NSD letter of approval

since I had met them during some of my practicum placements. I have tried avoiding quotes where I knew the client we speak of mentioned in a way that that affiliation is portrayed. There is one quote where we discuss this and I have kept it in my analysis, but I found no reasons not to include it in the text.

3.0 Analysis

The analysis of the answers given by my informants in my semi-structured interviews regarding the use of music technology, revealed several tendencies in the data regarding barriers of using music technology, reasons for not using music technology, and reasons for using music technology in clinical work. Four main themes emerged through the process of analyzing the data regarding the possibilities, potential and problems around the use of music technologies by four music therapists working with young people in Norway.

| Music Technology | Help Music Therapists | Engage With | Assist Clients |

3.1 A theoretical introduction to the themes

The *therapeutic process* is an aspect of music therapy that applies to all of the four themes that emerged from doing my analysis. To explain the therapeutic process in music therapy, according to Bruscia (1998, p. 33), you need to consider the time element. It is a process that takes time. Bruscia emphasizes the sequential nature of music therapy opposed to single encounters:

> "Music therapy is a process that takes time: It is a sequence of experiences leading to a desired state, rather than a single event that has an effect. It is a series of interactions leading to a client-therapist relationship rather than a single interpersonal encounter; it is a layered progression of musical engagements rather than an isolated musical experience; it is a gradual process of change for the client, or merely a spontaneous or sudden cure; it is a sequence of interventions for the therapist, not merely a one-time maneuver or isolated therapeutic act." (Bruscia, 1998, p. 33)

He also lists two criteria as to what qualifies as music therapy and what does not. The first is that music therapy is defined by the nature of the process and not merely the outcome. The second criteria makes a distinction between music therapy *process* and *services*. A process always involves repeated engagements in assessment, treatment and evaluation. Services typically include brief encounters that focuses on a particular part or aspect of the entire therapy process (1998, pp. 33-34). Again there is an emphasis on the time element and that

music therapy is a process that takes time. My themes are related to this way of thinking about process in regards to Bruscia's thoughts about music therapy as *goal-directed, organized, knowledge-based* and *regulated*. Also the *developmental, educational, interpersonal, artistic, musical, creative,* or *scientific* aspects are important descriptions of the process over time relevant to my thesis (1998, p. 20).

3.1.1 Music Technology

Music technology can be described as the tool, medium or instrument used in the *music experiences*. In this case, to achieve the music experiences, is either playing an instrument (e.g. electronic, amplified, assistive, computer based) or using an electronic device (e.g. computer, mobile phone, mp3 player, loop station) to play back, watch, record or manipulate music. Bruscia (1998, p. 98) raises the question regarding the meaning of music in a therapeutic context and the fact that music therapists "assume that clients can find music meaningful in some way and that this meaningfulness is essential to the process and effectiveness of therapy." For this thesis, bringing the concepts and ideas of music technology`s correlation to music in general into music therapy is very important in the process of understanding how or if music therapists can find it useful to apply music technology to their music therapy practice.

Garred (2006) argues that music therapy is defined primarily by the *"medium"* rather than the particular area of its application. Since music therapy is being defined by its own terms, it gives, in this case, music and music technology the role of the medium. It is not the use of technology itself that is therapeutic, but rather when and how technology is applied to music and put in the context of music therapy. Garred says that:

> "The logic of the term (music therapy) points to qualities of the medium itself as being therapeutic, rather than what it is therapeutic for. As a descriptive term music therapy is about the benefits that may come from applying music therapeutically, rather than it being directed specifically toward any particular, predefined ills or problems" (2006, p. 13).

He also points out that that music therapy might be looked upon as an inherent creative dynamism, an idea that apparently is far from exhausted. Simultaneously he asks if the tensions within the discourse of defining music therapy are at the same time driving the field onward into new uncharted territories (2006, p. 13). Since the use of music technology is somewhat new to the field of music therapy, the idea of it being a driving force might be the right quality to afford music technology in the music therapy discourse. Bruscia also

emphasizes the *promotion of health* aspect of music therapy. This is relevant to my research because of his focus on addressing the individual on all of his/her parts (e.g. body, psyche, spirit), and the individual`s relationship with the broader contexts of society, culture, and environment (1998, p. 21). In this thesis music technology is addressed to in the context of client relationships to *society* and *culture*. As the clients my informants work with are youths and adolescents it is relevant to assume that the clients have some experience with music technology as defined for this thesis.

3.1.2 Help Music Therapists

One well-known description of how to use instruments in music therapy is found in Creative Music Therapy, more known as the Nordoff - Robbins Model. In this model the use of harmony instruments with highly skilled musicians is the key element, and they have predominantly trained therapists in the sophisticated use of the piano (in rare cases, guitar) in improvised music making. In individual therapy clients are offered a limited channel for their musical material, mainly the cymbal or drum together with a strong encouragement to use their voice. Working with group settings, instruments such as pitched percussion, reed horns, wind instruments and various string instruments are offered. In the context of this thesis, this is a narrow and limited view on meeting the client`s needs. Researching this literature I found that to bring focus on the experience that is occurring, it is beneficial that the music therapist provides musical framing, establishment of clear rhythm and pulse and sings about what the client is doing while they are doing it to. But how these instruments mentioned above in particular provide the musical palette needed in the therapeutic process is not specified (Wigram, Pedersen, & Bonde, 2002, pp. 127-128). There is written about methods such as using bands and band-instruments (Aigen, 2005; McFerran, 2010), but little is said about how these methods can be useful for music therapists to better engage with and assist their clients in therapy.

Bruscia (1998) uses the word "*helps"* in his definition of music therapy. He asks the question; "Exactly what can a music therapist do to help his client that cannot be done by any other kind of health professional?" (1998, p. 59). In trying to understand how music therapy helps the client, he suggests that there are ways of looking at this myriad simply depending on client need and circumstances:

> "The therapist can help in certain ways and the music can help in others; sometimes they can help in the same says, and sometimes they cannot; sometimes only the therapist can provide the specific kind of help needed by the client, and sometimes

only the music can provide it; and sometimes both the therapist and music have to be combined to provide the help needed" (1998, p. 59).

How the therapist might find it useful to use different styles of music and instruments is not specified in this literature. How music therapists can find the use of certain mediums to do their work with clients in music therapy useful, is seemingly implied though not plainly expressed in music therapy literature. With this in mind, this theme should enlighten the possibilities music technology can provide music therapists in the therapeutic process.

3.1.3 Engage with

This theme is about the therapist engagement with the client and how this can get the client engaged or involved in music therapy. To follow up on his definition of the word "*helps*", Bruscia (1998, p. 59) asks "But how exactly does engagement in music help the client in a therapeutic way?" He lists ten types of interventions that the music therapist can provide for the clients musically, verbally or nonverbally with the main focus being on the *musical implementation, empathy, opportunities for self-expression, interaction, communication, feedback, exploration, making connections, redress, influence, motivation and validation* (1998, pp. 60-70). When engaging in music therapeutic interventions with young clients and in order to make the engagement with clients in music and therapeutic processes easier, the music therapist could benefit from having an understanding of their client`s cultural appropriations. It is important for the music therapist to be aware of what the appropriation of cultural materials achieves in action, what culture "does" for its consumers within the contexts of their lives and how music functions as an active ingredient of social formation (DeNora, 2000, pp. 6-7).

In this thesis I look at how music therapists who have practical knowledge about how to use music technologies, could find this knowledge useful to make the engagement in music with young clients who have music technology as a part of their daily interaction with music or music playing in general easier. Willis (1978, p. 193) points out that "it is the act of social engagement with a cultural item which activates and brings out particular meanings. Stige (2002, p. 111) writes about *music as cultural engagement* and suggests that the conception is that an individual is a part of a community, and that this community is cultural in nature. He uses the concept of culture in a narrow sense (art, music, etc.) and in a wide descriptive sense (tradition, values, etc.). Looking at how he discusses music therapy as *discipline, profession* and *practice* in the context of studying the growth of music therapy, he points out that "we must pay attention to the growth of music therapy as a field interacting with other fields, and

the social and cultural conditions that have supported or countered this development" (2002, p. 181). He suggests that music therapy as discipline "is the study and learning of the relationship between music and health", and as professional practice "is situated health musicking in a planned process of collaboration between client and therapist" (2002, pp. 182-184). To stress the importance of the role of the music therapist in music therapy, Bruscia suggests that it is "the combination of music and therapist in the role of the helper that differentiates it from other disciplines" (1998, p. 59). The way I read this is that it is not music therapy when you engage in music without the presence of a music therapist.

3.1.4 Assist Clients

According to *Oxford advanced learner's dictionary of current English* (Hornby et al., 2010, p. 60), the word *assist* means "to help someone, typically by doing a share of the work." I also chose to use the word assist because of the reference to assistive musical instruments. Another aspect of this theme is how the music therapist through assistance can enable clients to free themselves from their conventional internal ties and use the experiences they get in the moment in music therapy and further throughout a therapeutic process to an external purpose. This can be viewed through how Ruud (1997) discusses identity formation and how "identity formation always takes place within a specific social, historical and cultural context" (1997, p. 19). He also discusses music as participation and interaction in musical improvisation with clients where he points out that the challenge for the music therapist is to be aware of what comes from the music and which sounds come from the client, and then be able to *pick up, follow, assist, contain, evolve, contrast and challenge, respond, imitate etc.* musically with the client (1997, p. 37). To contextualize this to my thesis, it can be correlated with the broader view on technology that includes non-physical concepts like learning, culture and identity.

An assistive instrument can be defined as a "musical device that can be played by an individual with a range of independence, cognitive and physical abilities" (Moody et al., 2005, p. 1). When speaking of music technology, the term assistive instruments is very relevant in the context of music therapy and health care for people with disabilities that makes it challenging for them to interact in musical interactions with other people using regular musical instruments. Looking at a patent application for a modular automated assistive guitar, the inventors explain the functions their invention covers, by saying:

> "By learning to play an instrument, such as an assistive guitar, an individual has the opportunity to develop a sense of industry and competence. Music serves multiple

functions, including social, emotional, and compensatory needs, and is multi-modal, involving perceptual, cognitive, and physical processes." (2005, p. 18)

This might underline the need for a music therapist to master a range of mediums or instruments, musical and personal, to be able to assist his/her clients in music therapy. The music therapist can then provide direct assistance and intervention to the clients (Bruscia, 1998, p. 21).

3.2 Empirical review of the themes

3.2.1 Music Technology

First I needed to get an overview of my informant`s understanding of the term music technology. I asked the question; How do you define the term music technology?

> **Krüger:** Well, I have my view on what technology is. It has changed a little over the last 10 years. Before I thought of technology and music technology solely as objects and things that one in a way presented to the physical world. But after working a lot with music technology and reading a bit about it, I have come to the conclusion that the technology concept contains something more than just objects. There is more knowledge related to the music technology term. Technology is more than just things. Technology is about knowledge of how to use things. So the way I define music technology will be, well in a way, the knowledge of how to use instruments, computer programs. It may also be that technologies could be more as such abstract concepts as languages and cultures.

Krüger here emphasizes how technology can be a term describing having knowledge about how to use physical technologies as well as the objects it entails.

> **Skarpeid**: I think I define it in a way that you might be using the computer, that technology is more than just using technical aids and mp3 players.
>
> **Me**: What do you mean by technical aids?
>
> **Skarpeid**: I think that for example when you have an amp, it`s like that, something that you run your music through. In that sense there is something you turn on and off and using electricity. You could call that music technology. But I do not define that as technology. Music technology for me is that you use the computer, that you are using a recording system, a computer. I never thought of it before. This is what I think now…

Skarpeid focuses on the specifics of using computers and recording systems.

> **Kolstad**: For me, music technology is the way all tools that may be used and applied up against what that is plugged into a computer. That`s like my everyday attitude towards music technology.

Kolstad wrote his master thesis about the use of the computer studio as the primary activity in music therapy with youths in child protective services. He focused primarily on Ruud (1997) and his theories on music and identity with the question "In what ways can the formation of identity and identity development be promoted through the use of the computer studio in music therapy for a girl in child protective services?" (Kolstad, 2008). His thoughts on the computer studio in identity formation are that he sees it as "a possibility that the computer studio can help to initiate and be part of the focal relationships and processes we orient ourselves from in our identity formation" (2008).

> **Knutsen:** I am thinking first and foremost, in the first round, I think of software, music software on the computer such as sequel 2.0 for example, or Cubase. This type of software is the first that comes to mind. But otherwise I also think about it when one uses music technology to process technology in a very different way. If one has pedals to use with the guitar, bass and shapes the sound in some manner with technical installations. But also in terms of voice, microphones and being able to twist and distort the sound in a way with technology.

Knutsen has, like the other informants, the computer as a central defining component to the term music technology. The most interesting finding in this theme, was how different yet similar my informants defined music technology for themselves. Generally they defined music technology in terms of electronic devices. They also defined music technology according to how they relate and use music technologies both as music therapists and musicians. The most common denominator between them is the computer based music technologies, including software and recording hardware. But Krüger also lists "abstract concepts as languages and cultures" as a part of his definition of music technology. This is interesting because it affiliates technology to non-physical "things". He explains further:

> **Krüger**: I`ve got a much broader concept of technology than I had before. Now I think that it is important to have this broad concept of technology. Technologies are complex, advanced processes that one enters to participate in and use to achieve different advantages and disadvantages on your own and with others. And in the music therapy context, it is particularly important that we familiarize ourselves with the complexity in modern technologies. That this is really advanced stuff. The relationship between language, culture, identity, technology ... it is advanced. My definition of music technology is that there are complex and advanced processes that include concepts like, learning, culture, identity and physical objects.

Some more information of his broader view on technology is found in his essay "Music as Narrative Technology" (Krüger, 2007) where he proposes that "technology is a form of human activity, linking material and social worlds" in opposition to the common

understanding of it being solely material things. He also discusses how technologies can "expand the possibilities for exploring new horizons of meanings" and that "technologies are therefore viewed as social strategies or procedures for handling objects." This view can also be found in Forschammer`s definition of the term technology; "Technology is a socially produced strategy for the use of things" (2006, p. 132). Furthermore, DeNora (2000, p. 46) speaks about *music - a technology of the self,* and suggests that "focus on intimate musical practice, on the private or one-to-one forms of human–music interaction, offers an ideal vantage point for viewing music "in action", for observing music as it comes to be implicated in the construction of the self as an aesthetic agent." In her research her respondents listed six thematic categories; "memory, spiritual matters, sensorial matters (for pleasure, for example), mood change, mood enhancement and activities (including things such as exercise, bathing, working, eating, socializing, engaging in intimate activity, reading, sleeping)" (2000, p. 47) to which they used music in relation to. She says that:

> "This research points clearly to the ways in which music is appropriated by individuals as a resource for the ongoing constitution of themselves and their social psychological, physiological and emotional states. As such it points the way to a more overtly sociological focus on individual`s self-regulatory strategies and socio-cultural practices for the construction and maintenance of mood, memory and identity." (2000, p. 47)

All of my informants have experienced that clients use music as a self-regulatory tool. Their experience with the aspect of socio-cultural practices and strategies for the construction identity are defining terms for how they approach their clients in therapy. Krüger points out that "It is easy to create the dialogue with adolescents through music technology." Especially methods for getting to know their clients through music preferences using YouTube, Mp3 players and mobile phones as mediums, are mentioned. Looking back at what DeNora (2000) says about music as self-regulatory strategies and socio-cultural practices in a sociological sense, how my informants meet their clients in therapy reflects this approach in the way they are practicing music therapy. Ruud (1997) suggests that despite how external influences affect us, our personal perceptions and preconceptions of music are defining for how we experience music. Not solely looking at the term technology in this broad view beyond the physical objects, I can apply the same ideas Ruud (1997) has to the term music technology in music therapy. Working with youths and adolescents, music's role as a technology of identity, emotion and memory plays an important role in their everyday life in ways of construction of the self (DeNora, 2000).

My informants covered all of these definitions of music technology in music therapy contexts. They also reported evidence of relating to the fact that their clients often carry with them musical playback devices in the shape of mobile phones or mp3 players.

A while into the interview Skarpeid talks more about the use of mp3 players in music therapy:

> **Skarpeid**: I have actually, when I start to think about it, I`ve worked quite a lot with mp3 players. And I think that is music technology. And practical, mobile phones, because now everything is on the phone. So I`ve worked with it, the theme song they had on their phone, I`ve used it as a starting point for conversation. Music Technology, I`ve actually worked like this quite a lot.

In Skarpeid`s (2009) article about daily music listening amongst adolescent girls affiliated to her work at the Child and Adolescent outpatient clinic (BUP), she studies the influence the mp3 player has on their approach to music listening. She says that; "If we can understand more of the teen music activities, we can retrieve knowledge from this that we can use in the meet with them" (2009, p. 132).

Kolstad also informs about his experiences using mp3 players in music therapy with his clients:

> **Kolstad**: There is a lot of techno music and there is a lot of R & B. With the sound that`s found in Pro Tools[8], that`s the sound they are getting. They punch a "D" on the keyboard, and then they get a bass drum that they have heard before. And then they look it up on the mp3 player and look back up on the screen and so on. We have common references in sounds. It`s sort of the next step, then, a common catalogue. And here we work for a while, with sound references and that, until they begin to create and process their own sounds, which for me then is to touch on identity and identity creation of music with creating their own music. That`s next. And if the process is allowed to continue from there, that`s when, in a way, the therapeutic work really starts to pump.

He enlightens how the music clients refer to becomes the "norm" for how music sounds like, and how they expect music to sound like when they try to create their own material. Another way to get access to the client's music is through the Internet.

> **Skarpeid**: I use the web a lot, but I`m sure there are certainly plenty of opportunities there that I don`t take advantage of. I would not say that I do not use it, but I`m not the one who uses it the most either.
>
> **Me**: But you keep it as a part of what you can do?
>
> **Skarpeid**: I`ve used the web, if you think that music technology is a part of watching YouTube and watch a video and watch it together. Then I use it.

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[8] The industry-standard music and audio production software.

For the last 30 years there has been a tradition for using music technologies in music therapy clinical practice, research and education (Crowe & Rio, 2004; Meadows 2005). In the Hahna, et al, (2012, p. 1) quantitative research paper, they wanted to determine (a) how many music therapists use music technology in their clinical work, (b) trends regarding music technology usage related to gender, age, and/or geographical location, (c) how music therapists acquire knowledge and/or training in music technology, (d) barriers to using music technology in clinical work, (e) types of music technology music therapists currently use, and (f) why music therapists do or do not use music technology in their clinical practice. They defined music technology for this study "as the activation, playing, creation, amplification, and/or transcription of music through electronic and/or digital means" (2012, p. 1). Crowe and Rio (2004) did a research paper on how American music therapists associated with AMTA[9], used music technology in their practice and research. In their literature review, the term technology is applied to several definitions; "any equipment, devise or method that systematically fosters independent functioning, including the preproduction of or response to music, is used for music therapy practice, research and education" (2004, p. 288). Seven definitions of music technology used in music therapy practices emerged; "adapted musical instruments, recording technology, electric/electronic musical instruments, computer applications, medical technology, assistive technology for the disabled, and technology-based music/sound healing practices[10] (2004, p. 288).

My informants have documented through my research that the music technologies used across their music therapy practices include the terms; *physical objects, band instruments, computer based technologies, Internet/YouTube, mp3 players, mobile phones,* and concepts like*; learning, culture and identity.* The way their clients use music through music listening and playing using music technologies, show how music can be used in two ways; as therapy and in therapy. That is "with the music taking the primary role of helper and the therapist being secondary, and with the therapist taking the primary role of helper and the music being secondary" (Bruscia, 1998, p. 59). The way technology has made music more accessible, the method of music as therapy, has become a more common way of using music. The everyday listening of music is a big part of youth`s and adolescent`s life and the many ways of using music in their everyday life, can be "considered part of a competence valuable regarding the

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[9] American Music Therapy Association
[10] According to Bruscia (2007, p. 6), is healing practices a field of music therapy where; "the primary focus is on the vibrational or sonic relationships between matter and energy, individual and universe, all of which are essentially physical or exterior in nature … in healing, the agent of change is the universal energy forms found in music, and its component sounds and vibrations."

goals of therapy and ways of working in music therapy" (Rolvsjord, 2010, p. 190). Considering if and how clients use music technology in their everyday life should affect how music therapists approach their clients in therapy. This is bringing the concepts of music *as therapy* and *in therapy*, together as one. Bull (2007) also acknowledges the attributes iPods[11] have on our daily life:

> "Music is intimately linked to our deepest strivings and most powerful emotions. iPod use appears to offer a glimpse into the internal workings and strategies engaged in by users in their management of themselves, others and urban space through engaging in a series of self-regulatory practices through which they habitually manage their moods, volitions and desires." (2007, p. 21)

Considering this can have implications for clinical practice towards more equality and humility towards the client`s self-efficacy and the use of music (Skarpeid, 2009). It seems that it is very individual how and if music therapists use music technologies in their work. It makes it easier to use music technologies in your practice if you already know how to use it. Learning how to use it takes time.

> **Knutsen**: The downside is certainly just that you do not get enough time during your day at work to work on that. You must use your own spare time.
>
> **Me**: It is time consuming to get into it?
>
> **Knutsen**: Yes, it takes time to familiarize your self with it. If you could have taken a course, then you could learn a little.

With regards to other disadvantages of using technology, Krüger and Kolstad emphasize a few elements that all of my informants agreed on:

> **Krüger**: Disadvantages with this has to be related to the fact that, if there is too much stuff, technologies and things that stand in the way of the dialogue, meeting, having eye contact with the client and everything else that is important in the therapeutic process, then it can be a disadvantage for sure. If we can`t use the equipment, if it takes too long to turn on your PC and if you have to start reading instruction manuals in therapy sessions, then it becomes stupid and offer problems. They (clients) give us as music therapists, a challenge to learn the technology and being able to use it in the way that they traditionally used the djembe. It must be in the fingertips. And then we can work with what we are supposed to work with, namely the dialogue, encounter, and the strengthening of the self.

Kolstad focuses more on the general implications concerning the competence of the music therapist.

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[11] iPod is a pocket size Apple product used to play music files.

> **Kolstad**: I think quite frankly that in all forms of music therapy, the skill and confidence the therapist has in the tools he/she uses, has a direct transfer to how good the therapy will be. If you don`t know the chord progression in "Lisa went to school" well enough, if you have to make pauses in places it shouldn`t be pauses, it will surely become "poorer" music of it. And the interaction can be disrupted.

There are a few important aspects to consider regarding the implications of the use of music technology. Especially the ability to maintain the focus and attention of the client, not let technology "get in the way" of the dialogue and meeting, and that the music therapist should have a general expertise in the area in which he or she choses to work and with the instruments he or she choses to use.

3.2.2 Help Music Therapists

The purpose of this theme is to shed light on how music therapists can find the use of music technologies in their work useful. I asked them the question: How can music therapists benefit from the use of music technology in music therapy with clients?

> **Krüger:** If I am left with songs and recordings, it is easier for me to go back and understand what happened. To see what clients are occupied with, in a manner, thereby documenting the process. I have folders with recordings where I can go back to see that there, for a period of time there, nothing much was recorded, while over there, there were the ten recordings. It is a part of documenting the therapy process. And so one can see that, here, we came so far that we made the CD with artwork and stuff, and it was externalized out into the world. Out of the therapy setting, more than just therapy was done.

Using technology to record video and audio to document therapy sessions has, as I mentioned earlier in this chapter, been a part of music therapy practice for many years (Hahna, et al., 2012). Further into the interview I asked Krüger if he had anything to add to how the clients could benefit from the presence of a music therapist who is skilled in using music technologies:

> **Me:** Do you have anything more to add? Beyond that music technology is a tool and resource?

> **Krüger:** Yes, I can highlight an advantage that we haven't spoken about yet. And that is, with knowledge about how we use technology, music technology, you can document your patients or clients artistic contributions, texts, etc., and the documentation aspect, the one where you can create something that remains and the clients can take with them later in life. I`ve experienced this as important for the adolescents I have worked with. Then one might say that you are externalizing your own story, so that it is visible to others. That you can take home this CD to your family or friends, to show that this is a small part of me. I realized that the documentation part of this is very unique attribute of music technology, and it replaces writing journals and letters as you do in traditional therapy. Then we as music

therapists use music technology to create a concrete special kind of documentation of therapy. So that`s an advantage.

Working like this the therapist and client are producing a product that in some cases can represent the client beyond what goes on in therapy. The client can show this to people outside of therapy as a representation of their own identity, who they are and what they are able to produce. How music therapy transfers to and affects other aspects of the client's life and community are well know in the music therapy discourse and as the concept of *Community Music Therapy*. Community music therapy is a context-based and music-centered model that highlights the social and cultural factors influencing music therapy practice, theory and research (Ansdell, 2002). Ruud (1997, p. 105) looks at how identity is a part of a process of reflection where the individual looks at him/herself in regards to how he/she perceives how others view oneself, and correlate these opinions with his/her own self-perception. We can signal our social class and cultural affiliation through our concert habits or emphasis on ethnic, religious or subcultural affiliation through the music we acknowledge our self to. We can shape our self-perception within a bigger cultural field through the reaction we get from other people's opinions of our selves. Tervo (2005) experienced when working with adolescents and rock music that the client engaged in a kind of do-it-yourself music therapy, locating and listening to a desired recording as part of his/her everyday regulation and care. Applying how the client use, refer to and talk about his/her own music can be useful in music therapeutic settings in creating joint references and basis for a collaborative therapeutic process.

> **Kolstad:** But what I see is that, having this screen to speak through brings the dialogue up at a good level very quickly. And when we then on the first therapy session open the first session in Pro Tools, creating a new project, I use in a way my own terminology, because they sit there and punch keys on the keyboard and I`m sitting next to them as a supervisor and talking. Then situations arises that often are humorous, or situations that make them gesture that they need help to get things done where I can show them, or visa versa. And then this therapeutic conversation begins, the structure of our dialogue, our metaphors, the way that only the client and I have together, it starts very early.

The computer screen works as the facilitator of the therapeutic conversation. Garred (2006, p. 48) says that in dialogue and within an encounter, "The relation between I and YOU is mutual, a mutuality of on recognizing, accepting, and affirming the other as an interactive partner." It is reciprocal and it must go both ways. Also he says that it is not an active subject simply mastering a passive, subordinate object, in this case the computer. Relation is itself mutuality where the *You affects me, as I affect the You* (Buber in Garred, 2006, p. 49).

Wigram (2004, p. 97) defines "dialoguing" in music therapy as "A process where therapist and client/clients communicate through their musical play." Ruud (1998) discusses how improvisation and the learning of the musical code, meaning the rules necessary to create meaningful dialogue within a particular musical style are necessary for musical interaction. In this case this can be transferred to the communication between the therapist and client within the computer studio context. He explains further:

> "Learning the rules through musical turn-taking can be explained with concepts from communication theory as punctuation, symmetrical and complementary communication, and representation… and a successful musical dialogue may depend on a presence of a common code of musical understanding that allows for mutual prediction of musical phrases … to rework this type of musical interaction into a theory of communication is simply to regard it as learning." (1998, p. 153)

Skarpeid, who often works with clients diagnosed with Asperger Syndrome, believes that the computer screen can be a distracting factor that takes the focus away from the therapist/client interaction.

> **Skarpeid:** I work mostly directly, that is what they are often poorly on.
>
> **Me:** One to one communication?
>
> **Skarpeid:** Yes, communication. That`s often their problem. I think that it can be contraindicated to sit there with a screen, that you kind of just boost it.

Kolstad also reflects on the challenges concerned with using the computer studio in music therapy:

> **Kolstad:** When I started to discuss using the computer studio in music therapy and various negative angles with myself, I was very concerned about the aspect that young people use the computer a lot. The screen is in a way an escape route, a base for escape. And then within the applications they use. And often via the applications and on to the web where there are a lot of self-destructive things.

In cases like this music therapy aims to provide the individual clients safe options both for stimulation and navigation. Looking at the music therapist`s responsibility regarding Internet and exposure, Kolstad says that:

> **Kolstad:** I have experience with one of the clients on his/her own initiative at home, by then having bought his/her own studio, has live-streamed rehearsals in a general condition an ordinary well functioning person would never have allowed himself to be exposed in. Fortunately it was on a very small forum and with very few followers. The sad thing about the world of the Internet is that when you put something out there, it is traceable forever. So in the sanctuary, the virginity of working with something that you kind of are trying to develop and work out, "this is exactly what I mean," can disappear with it being leaked. Or by the client in view of himself or herself, find that

this is good enough to expose myself with. At the same time there's a balance, the therapist has a guidance role. But it`s like in all other professions we cannot be following our clients at home. There someone else has to take over.

Skarpeid experienced that the computer could be used to help the therapist understand the client from a different point of view and to help the client to communicate something meaningful to the therapist within his context of technology and culture.

> **Skarpeid:** It can be a variation to have access to it I think. I think that that is very important if you work with young people for example. That you know a little about youth culture. Then you must know something about technology. It`s also a way to show that you respect… it is exciting. Do you remember he who showed us videos, "do not look, now you have to guess what music I put on" right?

> **Me:** Yes.

> **Skarpeid:** He`s a boy that we can't figure out.

> **Me:** Is he still here?

> **Skarpeid:** He is not there now. He is going to be hospitalized, they don`t get him. It was very exciting in that encounter. He was the "king" in that session telling us we had to turn away, and "guess what you're going to hear now." There was lots of interesting information about this boy and then he had the star wars music... So, seen from my point of view, we see a totally different boy than who I would have seen. He offers on himself, he shows humor, he shows that he likes orchestral music. There are a lot of things he can say about himself that it might be difficult to see in other settings. They can become little "kings" too, when they get to experience it. In that way, I found that it was very enriching, to be allowed to witness this kind of encounter.

> **Me:** It is perhaps a little insight into his life? Because, he knew how to use it (YouTube) himself?

> **Skarpeid:** Yes, he could use it and he probably used it a lot. So you learn something. It was very nice, and I could probably have developed this as a method for observation.

With some clients that spend a lot of time with computers alone creating their own "world", the computer can provide a different approach to getting to know them through using the same tools as they are familiar with and give you access to this private sphere. Using the computer can provide the therapist a ground for observation, since the therapist is bringing a familiar environment the client has at home or in any other private situation, to the therapy room. Correlation can be found between this client and Benveniste et al. (2009, p. 4) who did an experiment using Wii Game technology with children suffering from behavioral disorders. They found that using this technology resulted in clear signs of improvement for children who have trouble socializing within a group. For findings in their cultural acceptance category,

they found three core reasons, *self-esteem, technology and capability*, for motivation to play and experiment with the system. DeNora (2000, p. 6) speaks of the concept of music as an *aesthetic agent,* meaning an understanding of culture where aesthetic materials have social "valency" in and through their circumstance of use. Technology may also act as a device or resource to make the client an aesthetic agent to regulate themselves to control the exigencies and situational demands made upon the client in and through the interaction with others (2000, p. 62).

> **Me:** It is perhaps when you say that you get a larger arsenal of instruments to use, and more flexibility maybe? And this benefits you as a music therapist?
>
> **Knutsen:** Yes, you get a wider repertoire of tools in a manner to meet the different people in the encounters. There`s a very wide range of people you meet. They are in many different places and levels in terms of what they master and what they like.
>
> **Me:** I think that it is quite important to consider the variety of clients, such as you who work with many people who are disabled in one way or another, that they still have a preference, a musical preference as to what is "cool" or "not cool." What age are your clients in?
>
> **Knutsen:** From children to 60 year olds, there is a huge range. It is clear that if you do not feel safe in a genre or in any form of music, you won`t use it. You use what you are feeling confident with when you are communicating something to others.
>
> **Me:** It requires that we keep up to date?
>
> **Knutsen:** Yes, but sometimes you have to say; "hey I have some limitations", right. But if you can lay the ground for someone else so that they become secure and even arrange for them to use things by them selves even though you may not master all of it yourself…
>
> **Me:** This might maybe be a learning process for them?
>
> **Knutsen:** Yes, if you have some rhythms that they can use to rap or whatever.
>
> **Me:** Yes, because there are some genres in music where music technology is very central, as in hip hop and rap. So one must perhaps be able to offer something for that to happen and for them to get the music experience?
>
> **Knutsen:** Yes, you must provide it.

Being able to provide music technology in situations where you meet clients with musical preferences that acquire certain mediums to create the music to meet them in therapy, can give the therapist a broader musical repertoire to offer. Wigram (2004, p. 35) discusses how musical elements becomes the language for musical expression in music. If technology is viewed as a part of the musical expression in terms of syntactic and semantic aspects, it becomes a part of language in order to express meaning. Looking at how my informants have

afforded technology with properties as a medium for identity and cultural affiliation, technology itself becomes a part of the language used in music therapy alongside verbal dialogue and music. Wigram lists the ability to produce these core elements of music; *pitch/frequency, tempo/pulse, rhythm, intensity/volume, duration, melody and harmony* as tremendously important in developing improvisational skills. Further he stresses that the meaning of improvised music is usually specific to the person who is creating it and that the emphatic level of sharing that goes on is not precise but nevertheless truthful in reflecting *moods, emotions* and *attitudes*. If reflecting *moods, emotions* and *attitudes* in improvised music is transferred to any other method, activity or situation in music therapy and used as an overall goal in the therapeutic process, the use of technology as expressed by my informants can be useful for the therapist. Technology can also be viewed as an objectification of youth culture. If music therapists are able to offer music technology as a part of the therapeutic process, it can be a way of respecting and showing interest in the client's situation and cultural affiliation. Krüger elaborated on why he used music technologies in his practice:

> **Krüger:** Yes, why do I use it? Well, it is a very good resource to have, because you can use the popular culture very effectively and smoothly. As I said earlier, you can go ahead with making Hip Hop beats, you can create metal riffs, and you can produce music, right. You can take the lyrics the adolescents bring and stuff like that into a sort of semi-professional framework. This sometimes turns out quite awesome. This might have to do with the fact that I belong to the music therapists who find it important to work with music in a way that glorifies and preserves the aesthetic expression. I am very fond of pop music, having grown up with it and have a very popular relationship to popular music in the broadest sense. Thus in many genres, not just "pop" music. I am a little concerned about it from a personal standpoint like that. It is important that it sounds good. I am not satisfied with that kind of mediocre recordings that is distorted. I like to work with things that are good, that has an aesthetic standard. I find that when working with adolescents they are also like that. They are very critical to their own stuff. If we record something that does not sound good, we do not need to keep it, we can wait until we`re recording for real. And to record for real, well, it is to spend time on it and add tracks on tracks and mixed and mastered and all this, right. For there is something with music technology now, that it has become so common, it is everywhere, right. If you have a Mac, you have a full functional recording system. So, in a way, the requirements for quality for hobby musicians, adolescents and for us music therapists too have been raised. We have deal with the fact that what we produce must be of good quality. I think. Now many will disagree with this, but I think so.

In light of what Krüger says here and Bruscia`s (1998, p. 20) criteria for defining the therapeutic process, *developmental, educational, interpersonal, artistic, musical, creative,* and *scientific,* music technology might be a natural medium to include for music therapists

working with youths and adolescents today and in the view of the information given by my other informants.

3.2.3 Engage with

This theme focuses on how the therapist gets engaged with the client and how engagement in music therapy using music technology can be therapeutic for the client.

> **Krüger:** You are working with communication, relationships, etc. right, and we work a lot with this with our youths as well. You can`t work with this without taking into consideration the youth aesthetics. If not, you`re messing with their self-image. That is what you do. Like, now we`re pretending as if we are making music here and what we`re really working on, is your self-image. But we don`t work like that. We work with popular culture seriously, dead seriously. Not on pretention. The ideals are Christina Aguilera and Nirvana. It`s Eminem and Michael Jackson who`s relevant, right. And it`s not music therapy music, it`s music!

Tervo (2005) also makes the connection between rock music and adolescent youth culture:

> "The significance of rock music is essentially connected with the fact that the adolescent has neither words nor commonly shared ways of expressing the new and never before experienced changes taking place within him or herself. Music can emotionally affect adolescents at a deeper level than is possible with words alone. Rock music can enable adolescents to express, to be in contact with and to share amongst themselves feelings of anger, rage, grief, longing, isolation, psychological disintegration etc., as well as to experience closeness. It can safely lull the adolescent into regressive moods and with its musical clarity, simplicity and high volume - give shelter to the distressed and may sometimes even be of help to confused adolescents." (2005)[12]

Tervo talks about music in a genre specific and then culture dependent way. This brings us to the broader understanding of the term music technology as mentioned earlier in this chapter by Krüger (2007). Kolstad and Krüger stress how music technologies also become tools for interaction.

> **Kolstad**: I think about music technology in the same way that you are thinking of a band-mate. And I think about it in relation to my client group who are often young people, but also physically and mentally handicapped, or children who have limited physical abilities. So technology is an extended arm that makes it easier to get into and engage in music.

Looking at the loop station as mentioned earlier, Kolstad says:

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[12] Found under the headline: Adolescence and Rock Music, section 3.

Kolstad: That is also technology, it`s a computer studio only it is in board form. We should have had 15 credit points in loop station. Because, it can provide a unique experience of music, compared to just a guitar. One must in a way see the value of the fact that there is more than one way to Rome. Just like there are multiple paths in to the client... Now I lack the word ... where change happens in therapy, there are several ways in there.

He emphasizes the fact that we need to expand our competence to be able to engage with our clients in a better way. It can give the music therapist a common platform to work from with clients. Skarpeid elaborates on music listening and music preference:

Skarpeid: Which songs they bring and that they bring with them their own songs, that`s what I`ve written about in my master thesis. Which songs they brought and how they relate to music listening. And then there is actually only use of music technology. But I had a slightly different focus than what you have.

Me: But some of the purpose here is to identify what music technology means, and that it doesn`t mean the same for everybody who work with it. And when you work with recorded music, mp3 players or phones, you say that you use music technology?

Skarpeid: Yes, and I`ve done that as well. And it is not long since I had a girl here who brought her own music. She had picked out songs that she wanted me to hear. It gets a bit more, what`s it called, not active music therapy, but receptive music therapy. It is a different kind of approach, to talk more about the text and why you have chosen it.

Me: Talking about the use of the Internet or music technology, in the same way as the adolescents do on their spare time, how do you think the music therapist should relate to that? Could it be useful?

Skarpeid: It is clear that it can be useful. But I guess, at least on a clinic.... It depends what the goal for the music therapy is and why do you use technology? Sometimes I am thinking that it`s about getting to know the youth. What kind of music do they listen to? It can be an approach. But often here where I work, it`s said, "it is Asperger, is there anything…" really like diagnosis treatment oriented. And I might say that going online is not very treatment oriented. But as establishment of contact, then it may be important. It is clear that there are things to be aware of and to know something about, for me as a music therapist, networks and web usage and what`s out there, must be really important. Being interested in what the patient is interested in.

When trying to explain how the *time element* matters to the therapeutic process, Bruscia says that; "Music therapy is evolutionary rather than momentary, sequential rather than singular, and gradual rather than sudden. It involves relationship rather than encounter, and engagement rather than manipulation" (1998, p. 33). For the therapist to understand how to engage with the client, he/she can find it beneficial to know something about the telling of the music`s effect, its connotations, and its implications for forms of social life. According to

DeNora (2000, pp. 31, 43) this may be understood through how composers and listeners make connections between music`s materials and other, non-musical things. She introduces the term process of *appropriation*, which is what consolidates and specifies music`s force.

Tervo says that "Music becomes rock music only when it is combined with the fantasies which the adolescent invests in it. This must take into account the sounds, rhythms, melodies, instruments, voice, lyrics and the combined effect of countless variations of tone" (2005)[13]. As I see it in relation to music technology, to create this music, the music therapist must adopt the necessary knowledge about music technology that is required to produce these sounds.

Knutsen elaborates on a case she had with a boy using the computer:

> **Knutsen:** Yes, but I must say that he, now he has started. He worked last fall, and then he made a melody that he ... what he did was partly sitting by the piano and figuring out melodies. He was very passionate about games, so he had some songs a bit like that from the game world. This was a composition that was like that, partly inspired by game-music. He made a melody and then he made rhythms and instruments that he found within the software.
>
> **Me:** And loops and such?
>
> **Knutsen:** Yes, loops and different things like that. So he created a composition that he presented at a Christmas concert. He transferred it onto a memory stick and then played it off.
>
> **Me:** That`s a very specific example.
>
> **Knutsen:** Yes, and it gave him very good feedback. It was clear that it was very okay, so he elaborated about this composition that he had made and how he had worked.
>
> **Me:** Would you have managed to engage this client if you had not had this to offer, to work like this?
>
> **Knutsen:** I think he would have quit at the end of the semester if I hadn`t.

Looking at the music therapy literature for this client demographic and the music therapists that work within this field, there is a correlation between how my informants talk about their experiences and thoughts about music therapy, clients (youths and adolescents) and music technology. The key elements that emerged from the interviews with my informants were; communication, relationships, popular culture, a band-mate, extension, an approach, music preference, getting to know the youth, being interested in what the patient is interested in and engaging the client. Knutsen emphasized an implication regarding the issue of engagement:

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[13] Found under the headline: Adolescence and Rock Music, section 3

> **Knutsen**: The downside is that you do not get enough time everyday to work on that. Then you have to use your spare time and some clients they need time to become familiar and accustomed to technology. For some it`s perfectly fine, while some are simply afraid. And they pull away and they don`t want to try it.

A challenge can be to keep the attention of the client. Some clients might have short attention spans and/or learning disorders due to several reasons, and then it might be very challenging for them to get engaged in music therapy if they don't get enough time to learn or become accustomed to the technology used in therapy.

Another aspect of this is when technology offers too many choices for clients and that they might get "lost" in exploring the instrument they have at hand. Knutsen had this experience with one of her clients:

> **Knutsen**: It is clear that you can probably experience that you lose them in a way. I experienced this using a keyboard. I had a student who had ADHD and we used the keyboard a lot to explore and to find sounds. It was one of those kinds with built-in effects and sounds. He disappeared into the blue, so to speak.
>
> **Me:** What do you mean, it was not interesting for him?
>
> **Knutsen**: I believe it was too chaotic for him in a way. He stuck with it though, but it did not seem as if he found it satisfactory in a way. Then it became a little difficult to limit the use of it too, because he went completely amok on the keyboard. But this was maybe also connected to my knowledge about the keyboard as well, how I kind of could have established a contact. I felt that he flipped out in a way, so we did not get any good results or anything he himself was happy with either. It was too much for him. And then in a way to go back to an acoustic piano, it was not appropriate.

What Knutsen enlightens here might be that sometimes it might be beneficial for the client to have limited access to, or limitations within instruments to keep the focus and attention of the client.

3.2.4 Assist clients

This theme is concerned with how the therapist, through the use of music technology, can assist the client in music therapy and enable them to engage in music. In the interviews the use of assistive instruments such as the Swing Bar Guitar ("Bunne Music," 2013) were prominent in Knutsen`s story about a client:

Me: It is an assistive instrument?

Knutsen: Yes, it is an assistive instrument. And I asked him if he wanted to play a regular guitar, if he wanted to play the bass, stuff like that. However, he did not bother to invest what it would cost him to learn to play it. He also played some keyboards for a while. And he had some notes and stuff and played some blues. It was also designed for him. And then he went over to the Swing Bar and he had a pretty big repertoire, but then he began to feel that it was too limited. Simply. So then I asked him if he would like to make some music on the computer. And he wanted to. Then we bought Sequel, or Compas was the software that we bought in the first round. I did some research…

Knutsen`s experience with how to use computer software designed for everybody with an autistic student shows how the skill level required to handle the computer software met this client`s need more when the Swing Bar Guitar was too "easy" and the regular guitar was too "hard" to play. For some, the process of learning an instrument can be extremely challenging and it can take years to master an instrument. And as in Knutsen`s experience, it was too challenging for her client to go in to the process of learning to play the regular guitar. This is also documented by what Crowe (2004, p. 24) suggests about music technology and music therapy education in USA: "Relating technology as one form of music therapy activity intervention for various client groups and developing skills as it relates to each client is an appropriate means for the students to develop skills in technology relevant to the discipline." Knight and LaGasse (2012, p. 193) found that using some music production tools on computers helped the therapist to engage clients in songwriting and technology as a medium consequently helped them to reach the therapeutic goals for improving the client`s speech. Krüger (2000) concluded in his article about working with youths and adolescents with behavioral problems in contemporary schools that the computer could offer great possibilities for structuring and even altering patterns of social behavior. The instrument and music software provides the music therapist with almost unlimited use of combinations of applications. Regarding the nature of music therapy as a process of time, he says that if the computer is used systematically over a long period of time, it can be an effective medium for increasing basic social knowledge and acknowledgement.

An implication that Knutsen also highlighted is that within the assistive properties of these instruments, swing bar guitar and chime bar, there might also occur some limitations for some clients due to its simple design. Talking about how to make the most out of the sound you can get from your clients, "the little sound", Knutsen underlines the challenges that a music therapist might encounter and how technology can play a role in assisting clients who are handicapped in one way or another:

Knutsen: When there is very little sound and it is very silent, it doesn`t really "get out." Because you do not have the right tools to get it out. Unless they can use their voice, you need a microphone that picks up the tiny sound to then get it out.

Me: So it`s about being able to use that little sound?

Knutsen: Yes, if it is just the small sound from a chime bar or a bass guitar. Now I use one of those one string bass guitars and it works very well, because then you can get a lot of sound. And then you see a little bit of how it works. You do not need to use big movements (physical) to get sound. I would have liked to be able to know more about how to shape the sound in relation those kinds of instruments. If you have pedals or ... then I could certainly have used it more if I could have and had more knowledge about it.

A very common aspect of how a music therapist work is that the therapist often has to travel to where the client is. Kolstad comments on how music technology can be transported and used in these settings where the therapist has to go meet the client:

Kolstad: Having the computer with you, record live, letting the clients listen back immediately hearing their own voice. Optionally using an iPad where there is a touch drum which also gives you a visual arena, a joint focal point. So music technology is in a way for me equal with all other musical music therapeutic tools, such as acoustic djembes, acoustic guitars and all sorts of possible forms of music to engage in. And then there is a big discussion back and forth about what you miss musically, the authenticity in the interaction in music when using technology.

Krüger finds several advantages using music technology to assist clients in music therapy:

Krüger: Advantages of this to begin with are that you can create a contact and proximity to youth identities. Hip Hop music is very technology based. Beats are made on PC, there is no doubt about it, with music software. So when you use this, you come in contact with youth culture very easily. It is easy to get into dialogue with young people through music like that. The same applies to the way heavy metal, metal right, it`s very convenient to work with electric guitars to create the metal sound. Tune down the guitar and then you sort of go online immediately. You can interact with metal fans very easily. And it is completely unthinkable to do that without technology. It must be authentic. And you must have the knowledge of how to do it. So it opens a lot of possibilities then.

Krüger points at how assisting clients to be able to produce the sounds and timbres needed to create the sounds familiar to them, helping them to play within the genres they want to and feel affiliated with. Ruud (1997, p. 120) defines authenticity as the experience of something *genuine* and *natural*. But since it is a purely subjective way of discussing music the term falls apart when different experiences of authenticity are put up against each other. Authenticity must then be seen upon as a specific figure of speech about music, a way to uphold and prefer certain types of music before others and a way to refine your own identity.

Skarpeid talks about how to find information about the music and culture that is relevant for the client:

> **Skarpeid:** To know, that you know how to do it, simply where to find information ... It`s really good I think for the patient, that if you show that you are interested, then it has to be really good. So this is a form of technology, when they bring their mobile phones so I can find playlists on them. It`s easier.
>
> **Me:** But that applies everything doesn`t it? (to know how to do it)
>
> **Skarpeid:** Everything. But I think that there should not be the way that the second best is the enemy in a way. That we can use technology based on where we are and the preconditions we have.

This brings me further to how music therapists can misinterpret what the client wants or do poor versions of what they want to achieve musically:

> **Krüger:** On the other hand, when the person is experiencing what you are doing as a big pile of shit, some terrible stuff, this person will get problems with his/her self-confidence that you originally were dealing with. So it becomes a downward spiral. You cannot drop it. You must keep the aesthetics.
>
> **Me:** So, how do you put the concepts of music therapy music and aesthetics up against each other?
>
> **Krüger:** You know who I work with, I work with children where inclusion, integration and normalization, in a way, is a part of the process, as in local communities in culture houses and stuff. I`m talking from within my context, this is important to underline. There it will be important to work with cultural aesthetics, youth aesthetics that exist within the community. And then to accept something else as music therapy aesthetics, that doesn`t quite work. It does not fit.
>
> **Me:** Because music is music?
>
> **Krüger:** Music is music. And the music is, the more "normal" the music is, to use that kind word, the easier it is to work with it.

Through considering the popular culture the client affiliates to, we can better assist clients in resolving the therapeutic obstacles at hand. Stige (2002, p. 9) also acknowledges the fact that aesthetics is not talked about enough in music therapy. He proposes a hypothesis for it being "that some music therapy communities have defined themselves as countercultures with anti-elitist values, and that this has fueled a refusal of aesthetic theories, which have been conceived of as carriers of exclusive values." In musicology literature, the role of aesthetics is also a debated concern. The musicologist von Appen (2007) also enlightens the negative and elitist connotation of this term:

> "The image of aesthetics is negative, not only in pop music research, it is seen as normative, and with its concepts of immanent timeless values, disinterested pleasure and contemplation too far removed from the realities of customary music listening. Music aesthetics, although a discipline of systematic musicology, appears to be closer to the conventional middle-class, well-to-do, highly cultured musical historian who legitimizes his art music canon in this way, compared to a more liberal and progressive systematic musicology that often addresses musical forms of greater social relevance." (2007, p. 6)

Ruud (1997, p. 106) says that music helps us to construct connections to other musical and social worlds in a way that not just marks or mirrors social positions, but becomes a means to change social rooms, to move boundaries. But for this to happen, the quality of the musical event must be good. Ruud (1997) has been a pioneer theoretically with his concepts of code affiliation and music and identity theory. Transcribing my interviews I realized that there is a link between code affiliation and technology. Youth culture and technology are interwoven by the way youth culture interacts with and adapts technology. Talking about national and ethnic affiliation in relation to the correlation between music and sense of space, he says that; "Although we live in a culture where different landscapes of technology, media images, and economics affect our experiences, we still bring our own values, beliefs and world views with us in the face of music" (1997, p. 159). In a more recent book, *Soundscapes - about use and misuse of music* (Ruud, 2005a, pp. 54-57), he discusses how sound influence how we interact with our surroundings, our perception of sound, place and affiliation and how sound and place, the sonotope (topos: place), are important anchor points for identity. He introduces the term "acoustemology", which is music anthropologist Steven Felds` understanding of how human relationship to sound can create a world full of meaning. The acoustemology explores the sonic as a part of the cultural distinctive that resonates in us when we experience affiliation to a landscape.

In exploring music preferences, Craig (2009, p. 67) studied the relationship of emotional responses to specific music with the amount of meaningfulness associated with that music through physical response. He found correlation to previous research that presumed that "increasing meaningfulness of music as a whole motivates the individual to engage in educational and therapeutic activities, allowing for more successful outcomes." He suggests that this is especially useful for a music therapist or educator working in a context where the student or client has difficulty communicating the types of music that is meaningful through objective observations. Ruud (2000) argues that:

> "For the music therapist, the question of musical meaning is not only a question of "aesthetics"; how music affects us is a moral question, a highly pragmatic issue in the sense that we need empirical evidence rather than speculative arguments. To do musical analysis of music therapy products and processes, we need to involve the listener and performer in a direct way. What is "aesthetically significant" in music cannot be decided from a disembodied analysis, it must take into account the particular situation, the clinical as well as the cultural, as well as the particulars." (2000)[14]

My informants highlighted these aspects of assisting their clients in music therapy; the "little sound", assistive instruments, authenticity, joint focal point, dialogue, youth identities, youth culture and aesthetic significance. With these aspects in mind, Bruscia (1998, pp. 61-62) stresses the need to provide the client with opportunities of self-expression. Within this lies how the therapists engage clients in a wide variety of activities and experiences aimed at helping them to externalize, enact, realize, ventilate, represent, project or document their inner experiences.

My informants also reflected on implications, disadvantages and how music technology could interfere with the therapeutic process for both the therapist and the client. Knutsen mentioned earlier how assistive instruments could be limited for the client since its simple design. Regarding the Internet, Kolstad says that:

> **Kolstad:** They can take the some of the things you use in therapy to post on Facebook still not being finished working on it and are so unhealthy that they can`t judge for themselves whether this is good or bad.

Kolstad points to an important reality regarding the use of music technology, the Internet and the issues regarding exposure on the Internet. All of my informants shared experiences with me in their interviews about clients posting music online on their own initiative without the presence or influence by the music therapist. Previously in this thesis I quoted Kolstad saying how some aspects of music therapy are beyond the therapist's control, but that the therapist should do what he/she can to inform and advice the client about the implications surrounding exposing themselves on the Internet.

> **Skarpeid:** Yes, we talked about aesthetics. It`s an important thing. I really think so. At least when you record yourself, then it's an important thing. That you should know about that. I do not think that this is something bad, it can be reality orientation, etc. But you should at least be aware of it, know about it.

A relevant feature that Skarpeid pointed out was how the therapist`s role could be to orient the client about the realities concerning their person, music and the culture they live in and try to

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[14] Found under the headline: Interfaces, section 3.

prepare them for the reality of the feedback they might get and how that might influence and have impact on them. This might be especially important for the clients my informants have that are particularly vulnerable. But as Kolstad pointed out, somebody else has to take over this responsibility when the client is not in therapy and are in other situations where parents or other caregivers could influence the client`s behavior and decision-making.

> **Krüger:** If you have too much stuff there, and technologies and things stand in the way of the dialogue, meeting, the other`s eye contact and all that is important in the therapeutic process, then it may be a disadvantage. If an adolescent comes to me and have something at heart, she wants to tell you something and I can see that something is bothering this adolescent, and then beginning to draw attention to a lot of studio programs and sort of initiate processes that takes away the ability to simply listen to "how are you?" Then it's a bad situation to be very technology-oriented. But I can tell you an example of when it would be a good way to take it on, if you are interested?

> **Me:** I am very interested in that.

> **Krüger:** If you have a youngster who comes and can`t fully express what the problem is, when what we are going to do is a bit vague, and it rests a little bit of insecurity in the situation, then getting started with technology is an opportunity to a way to work through a process where the technology and the things mediates the process. To use a Vygotsky word, mediation, you work through things, you get to come up with thoughts and feelings and stuff like that. So, I guess these are two extremes. The one, if there is a clear need, a direct encounter, dialogue, understanding, or if you kind of have to work your way through it, somehow search for it a bit, then technology is very good to have. Because it creates this distance, adolescents can be a little bit insecure. They will not go into these kind of a bit heavy conversations. It takes a bit of time.

An important implication Krüger mentions is about music technology and the danger of it taking the focus away from what that is really going on. The goal must always be to meet and see the client in his/her entirety. The method comes second as the interpersonal, social skill level and the effort to be of assistance in promotion of health and addressing the specific health concerns including physical, mental, emotional, social, and spiritual well-being of the client comes first (Bruscia, 1998, pp. 50-51).

4.0 Discussion

In this chapter I enlighten the key issues that emerged from my study regarding how my informants reflected on the possibilities, potential and problems around the use of music technologies. Reviewing my research question "how can music technologies help music therapists to engage with and assist clients in the therapeutic process?" with the information my research provided me with, I found that the use of music technology can be very useful for music therapists working with youths and adolescents. From the themes that emerged from my analysis, I found that there are multiple factors that affect why and how this can be done.

The most prominent factors that emerged from my research are related to how music therapists meet the client needs in terms of physical and cognitive capabilities and cultural affiliation. Consequently leading to helping them transfer what they get from music therapy to something constructive in a progressive physical life through socialization, acceptance, sense of achievement and self-worth within the community they live in. Another important aspect my informants highlighted was how the use of music technology can provide the music therapist and client with opportunities to document what happens in therapy. Apart from allowing the music therapist to document what happens in therapy for revision, this documentation of musical work can be used to help the client to externalize the feelings and connotations that are embodied in the recorded music.

Further this led me to how the use of music technologies might be useful in the therapeutic interaction between therapist and client and to improve the therapist`s relational skills in acknowledgment, reciprocity and affect attunement towards the client to prevent an asymmetric relationship between them. Technology can contribute to a more equal relationship between therapist and client when instruments or mediums that are familiar to the client are used. Also having knowledge about how clients use music as self-regulatory tools and experience with the aspects of socio-cultural practices and strategies for the construction identity are defining terms for how my informants approach their clients in music therapy. My informants expressed that it is useful to use instruments or mediums that can provide the aesthetic palette or musical reference their clients familiarize themselves with in music therapy. The music therapist can then further help their clients to contextualize and give this music new meaning and consequently assist them in systematically using music to achieve therapeutic goals.

4.1 Music technology`s role in music therapy

My informant's definition of music technology mainly included computer-based technologies but also included a broader definition that included the concepts of language and culture. In the discussion about whether it is important for music therapists to familiarize themselves with the complexities of modern technologies or not, the combination of the definition of music technology as physical things and non-physical concepts in music therapy was enriching. From this discussion my research points at how knowledge about the relationships between language, culture, identity and technological objects can be important to the process and effectiveness of music therapy. Affording technology with the properties of a medium for identity, cultural affiliation and technology as an object, allows music technology to become a part of the language used in music therapy alongside verbal dialogue and music. With this cultural engagement through understanding the client's cultural appropriation using the youths and adolescent`s language and aesthetics, the music therapist is showing a genuine interest in their life and is meeting them in a way that enhances the communication and relationships that evolve through them in acknowledging their self-image. Music therapists can then assist clients through using music and serving needs such as social, emotional and compensatory, and perceptual, cognitive and physical processes.

Especially in youth and popular culture, music technology represents something more than just the physical object it can be perceived as. It signals affiliation to sub-cultures and groups where technology and music preference are interwoven and projected physically as abstract non-physical things in complex, evolving and ever-changing ways on to the environment and culture in which these youths and adolescents live (DeNora, 2000; Krüger, 2007; Ruud, 1997; B Stige, 2002). A process of working with code affiliation and social and cultural engagement with a cultural item such as a music technological instrument in music therapy (DeNora, 2000; B Stige, 2002), can provide clients with the knowledge about how to use music technology in a way that can enable them to use music technology as an instrument for promotion of storytelling and identity development within their culture. This knowledge also applies to how technological advances in modern society with e.g. communication technology and consumer durables, have affected youths and adolescents and can contribute to the music therapist having a better understanding of the client (Huq, 2006).

Krüger (2009, p. 134) accentuates how the therapist`s and client`s familiarity and knowledge about a cultural item, in a non-physical perspective, such as pop music can affect how an asymmetric relationship between them can be avoided. The familiarity with methods, in a

physical sense, such as songwriting, arranging and production technologies when working with pop music, allows the therapist to work with the client without having to go into any instruction or guidance. If the therapist has knowledge about the client prerequisites in terms of e.g. pop music, it provides the therapist with good opportunities to continue working with what the adolescents know from before. There is no need to introduce something new, but they can work with familiar themes such as well-worn cultural tools and social-cultural resources that are already embodied in language, traditions, values and aesthetic frames of references.

My informants have experienced that working with familiar methods and music enables other objectives and therapeutic goals such as establishing routines or creating a dialogue and communication with significant others to be accomplished. These code affiliations are beneficial for both the music therapist and client in sharing a musical identity and competence through working with familiar physical and non-physical cultural items such as instruments, music preferences, jargon, musical understandings and methods of working (DeNora, 2000; Kolstad, 2008; Ruud, 1997; Skarpeid, 2009). Working with these methods using music technologies, music therapists can achieve an equal relationship and mutuality through collaboration and respect (Rolvsjord, 2010). This collaborative relationship can also lead to cultural learning where the process of developing diverse relationships to stimuli is encountered (Stige, 2002, p. 214). This is evident in how the term *musics* is used in music therapy. When music therapists can understand and process what *musics* means to their clients through what enfolds from their histories, values, conventions, institutions, and technologies, the music therapist can help the client to contextualize and make sense of their music (Middleton, et al., 2003, p. 19).

4.2 Implications - for practice, education and research

When talking about implications regarding the working definition of music therapy, Bruscia (1998) stresses the complex nature of music therapy. Music therapy as a practice has a collective identity that "both includes and goes beyond the identities of all practitioners" (1998, p. 261). Looking at how the field of music therapy has changed and developed since he wrote this in 1998, how we define music therapy might have changed as well.

Bruscia (1998) says that music therapy practice, theory and research are all interdependent and equally important aspects and serves for different purposes. First and foremost he argues that music therapy is a discipline of practice with the specific purpose of promoting health.

Developing and implementing relevant and important literature to the profession and education of music therapists is necessary and I hope that my thesis can add to the literature base in music therapy and contribute to this purpose. Bruscia says that students at the augmentative level (undergraduate) should be introduced to all areas of practice; the intensive level (master) should prepare students to practice one or more areas, be introduced to basic skills in research and theory and an advanced credential should be created to reflect this level of competence; and that the PhD level should prepare students to practice at the primary level, while also imparting advanced skills in research and theory. The purpose of research and theory is "to enhance our knowledge about clinical practice and thereby facilitate its aims" (1998, p. 262). With this thesis I have tried to contribute to bringing new and relevant research literature to music therapy and the issues my thesis discusses about how to implement music technologies in music therapy practices, is in line with what Bruscia argues is the purpose and role of research and theory in the process of driving the field of music therapy forward.

Based on my research, I would suggest that the field of music therapy would benefit from being up to date and consistent with clinical practice, theory and research in regards to music technological developments in modern society. Stige (2002, p. 183) argues that there might be a need for music therapy to be redefined continuously as new practices and perspectives are developed. To make music therapy successful for clients and for the further development of music therapy as a practice, it might be useful for music therapists to follow the same technological advances as their clients does. If the strength and potential of the client lies in technology based music, a competence in methods reflecting the client's musical identity, being emotionally involved in music and foster positive emotions should be used to achieve therapeutic goals. Then the music therapist is using unique and essential therapeutic principles for therapists working in resource oriented music therapy (Rolvsjord, Gold, & Stige, 2005).

This is also underlined by how Ruud (1997) discusses code affiliation and when working with the development of identity and how it creates expectations and traces in the individual through the sharing of music with the same tone language (1997, p. 33). My informants refer to experiences with clients where the sharing and common understanding of a musical work or instrument has been important for how they engage with clients in music therapy. Sharing an understanding of cultural appropriations (DeNora, 2000) can provide the music therapist with a wider repertoire of tools to prepare them to encounter the diversity of clients they meet in music therapy. My informants experienced that music technology, in the physical sense,

can also create a distance that can be securing for clients who are insecure and uncomfortable in one-to-one interactions. Some clients have barriers that make it difficult for them to engage in very personal and direct conversations, and working with music technology can be useful in the therapeutic process to arrive at a point where it is natural for the client to engage in such a dialogue with the therapist.

My informants have also expressed an emphasis on how the therapist`s relational skills in terms of acknowledgment, reciprocity and affect attunement can be elevated with the use of music technologies. Affect attunement is a term Stern (1985) uses to describe the mother/child communication (in the recent literature, Stern links this to the "parent" role, and not specifically to the role of the mother) that is required for a healthy childhood development. He believes that imitation of the inner state of the child or patient is not sufficient, the person has to be read through his/her overt behavior and that it is only through the similarity of the inner experience that attunement is achieved. Affect attunement is not just about acknowledging and imitating what the client is doing physically, but also acknowledging and responding to how the client feels. The parent/child interaction entails that the parent does a selective imitation, an affect attunement, where the parent switches to a different modality (e.g. from seen action to heard sound) but keeping the dynamic features faithfully resulting in a matching of the vitality form between them. Stern ties affect attunement to the immediate and not to the cultural. But the immediate affect attunement does not cease to exist as the child/client adapts cultural affiliations. It is a congenital ability that I think, if nourished, transfers to a cultural attunement and identity. In the context of this thesis, this matching and sharing of dynamic forms of vitality are properties that can be afforded to the use of music technology to provide new communication channels between the music therapist and client by means of new approaches to music therapy activities (Stern, 2010, pp. 41-42).

A good relationship and affect attunement is not dependent on the technology alone, but technology can help the therapist to connect to the client`s identity on his/her home turf. As mentioned earlier, the contact between the music therapist and client might be too intimate for youths and adolescents depending on the context. The work with the clients Skarpeid meet at her practice, often diagnosed with Asperger Syndrome, might not benefit from using music technologies such as the computer. The screen then becomes a distracting element that creates an escape route that is degenerative when trying to generate a one-to-one communication. The client sort of "disappears" into the screen. The clients Kolstad works with in his practice,

often girls who are under child protective services and lives in institutions, can benefit from using the computer. The screen functions as a common focal point that elevates the communication through the use a common language and understanding. Knutsen also experienced that some of her clients could get "hung up" on some of the sounds provided by an electric keyboard, and the therapeutic process came to a standstill because of the mismatch between client, technology and therapeutic goals. For clients that have short attention spans and who are constantly shifting their focus from one thing to another because it might be too challenging to be present "in the moment", Knutsen experienced that music technology sometimes offered too many choices and focus points that made it difficult to engage with the client to collaborate in working towards a therapeutic goal. Krüger also pointed out that the therapy could suffer if technology gets in the way for what the client really needs to express to the therapist. The music therapist must always have the attention on the client and not let music technology disrupt the dialogue and meeting.

Implementing how to use music technologies in music therapy training and providing opportunities in forms of courses and workshops for music therapists who want to learn more after they have finished their training, is necessary for music therapists to have an expertise in the field of music technology and makes it easier for music therapists to keep up to date with the latest music technological advances. In response to Streeter (2007) and her article *Reactions and Responses from the Music Therapy Community to the Growth of Computers and Technology - Some Preliminary Thoughts*, Debra Burns (2007), the head of the Music Therapy program at Indiana University - Purdue University in Indianapolis, informs about the view they have on music technology. They offer a Master of Science degree that at the time was under expansion. Burns says that she herself is amazed by the numerous ways individuals can access and create music for personal enjoyment using technology. She also says that this research will promote music-based interventions to become accessible to more individuals in very cost-effective ways. Compared to buying a piano or xylophone, a range of music technologies are less expensive and can reach a broader client population. This is a great benefit for therapists working with youths and adolescents in today`s society.

The integration of music technology training in education programs and in continuing education opportunities for music therapists could be beneficial for the field of music therapy in containing a progressive position in health care services. Educational programs, courses or workshops geared towards various stages of technological familiarity might also be useful and found interesting for assisting music therapists with an already extensive clinical

experience in incorporating music technology in their clinical work (Hahna, et al., 2012, p. 261). Crowe (2004, p. 25) argues that "with increased interest in and importance of technology in music therapy practice and research, the educational needs of music therapy students in this area need to be addressed. Continued research and attention from the discipline will help to identify these needs and establish educational standards in this area." With this statement Crowe gives the responsibility for adapting these skills over to the educational system. My informants expressed that they experienced that it was more up to themselves to gain knowledge and experience about using music technologies in their clinical work. This might be affected by that some of my informants undertook their clinical training at a time where music technology was not implemented in the music therapy discourse in education and literature, or when technology was less a part of everyday life or society (Hahna, et al., 2012, p. 261). The knowledge about music technology my informants gained by themselves and have implemented in their practice with clients includes using popular culture and music preferences, everyday listening of music with Mp3 players, the computer studio and assistive instruments and more. Based on my research and how Bruscia (1998) argues that "professional associations in music therapy have a responsibility to represent and promote *all* areas of music therapy, or to state their delimitations in this regard in all published materials" (1998, p. 262), I would argue that music therapy education would benefit from implementing these aspects of using music technology in music therapy with youths and adolescents in their programs.

4.3 Challenges and areas of improvement

I have highlighted many positive aspects and opportunities related to the use music technologies in music therapy with youths and adolescents. But the use of music technologies might also have possible negative consequences that require awareness and attention of the music therapist. One challenge associated with the use of music technologies that my findings have elucidated is associated with exposure, and that there are ethical issues in relation to when the client exposes him/her self on the Internet with material made in a music therapy setting, or publishing material made outside the therapy room on his/her own initiative But what can the music therapist do? According to a survey of equipment and operational situation of basic education from 2006 to 2007, over 90 percent of all computers in primary and secondary schools in Norway are connected to the Internet (Post og teletilsynet, 2011). Generally youths and adolescents have higher user expertise on the Internet than teachers and teachers have greater expertise on source criticism, ethics and educational use of the Internet.

Therefore it is important that it is the teacher who sets the terms for how the Internet is being used in education. The computer is being used more and more in music therapy settings and I would argue that music therapists should in their training learn about the potential dangers and issues concerning the use of the Internet. Especially, I find the issues concerning exposure important. My informants had experiences with clients posting material online that could be harmful for them. My informants also emphasized that the music therapist has a responsibility to inform and advice their clients about the implications surrounding exposure and how to protect themselves against various threats and dangers of Internet use. In education the use of Internet is widespread as a tool to obtain information and more importantly in the daily teaching situations through extensive use of Learning Management Systems (LMS), blogging and other educational programs. It is therefore important for music therapists to have a didactic (moral responsibility) attitude towards the use of Internet with their clients and also to have knowledge about how youths and adolescents use the Internet professionally, for entertainment (YouTube and online gaming) and for socializing though social medias such as Facebook. By having "netiquette" as a part of how to use the Internet with clients, the music therapist can provide useful information that can be defining for how clients approach the online virtual reality. On the Norwegian website about netiquette www.nettvettt.no (2011), they have a list of points of how to approach using the Internet with youths and adolescents. These points include teaching how to use the Internet with a critical eye since not everything on the Web is true and healthy and some sites have hidden messages or have strong commercial interests, how not to give away personal information indiscriminately and why they should not post pictures of themselves. For the music therapist, further challenges can be working with clients who post music online that they have made in therapy settings, and who are in contact with strangers on the Internet and the friendship comes to a point where they want to meet in person.

My informants reflected on how some clients can be particularly vulnerable to the feedback they might receive online. Skarpeid pointed out that how the aesthetics of the recorded material can be used to reflect upon the difference between the recorded material and pop music in general. Once you have published something online, you are competing with the best and the rest of the musicians out there and are available and open for the same criticism as they are. For music therapists it can be useful to have a reality-oriented focus when discussing recorded material with clients. This is especially important when the client have not obtained a proper understanding of his/her own competence and abilities and then raise awareness

around how the client expresses and portrays him/herself to other people. The therapist can make the client aware of that when you express something to the world you are very likely to get a response, and that you should not expose yourself when you cannot handle or are not in a position to digest the response you get back in a healthy manner. Then the exposure can have harmful consequences. If the music therapists manage to work with the clients so that the use of online facilities becomes constructive, the use of the Internet should not be a problem, but an enrichment (Post og teletilsynet, 2011).

4.4 A critical view on my own research

A weakness in my research is that I have procured quite a wide spread of information from my informants. They have given me both their expert opinions and experiences, and stories from their practice. This is a challenge related to the analysis of the empirical data due to the breadth of the information. Also I included relatively few informants to represent the music therapist and client population within this area of practice. This means that my research does not allow for generalizability, but provides insight into how some music therapists apply music technology to their work with youths and adolescents in Norway and their reflections around this topic.

In agreement with the informants, I chose to not anonymize them in this study, which might give implications for the readers that know who they are. The reader might have opinions about their practice and points of view from a personal standpoint that might not have come across through this thesis, and which might affect how the reader interprets the findings I present here. Also the translation of the interviews from Norwegian to English might have affected how my informants are cited and caused some of the underlying meaning in their verbal expression to be lost.

Conducting a qualitative research interview can be a methodological challenge for the interviewer. For me the biggest challenge was to prepare the interview questions in a manner that were not too leading and were open enough to give room for the informants to give the answers they wanted to give. This has been my first research project and the knowledge I gained from my informants and the literature I have studied during this process has made me, in retrospect, see that there are things I might have done differently. With this knowledge I might have had a broader understanding during my process of analysis and enlightened other aspects of my empirical data linking to music technology`s role in music therapy theory and

practice and to my research question that I introduced to the reader in the introduction of the thesis.

My own experiences of working with youths and adolescents might have given me a biased starting point for doing this research and might have made the informants who does not use music technology so much in their practice feel that they would have to defend their methods of practice. I was very conscious about this when I conducted the interviews since my interest in this topic was fueled by my experience of seeing how music technology could help the therapist in assisting the client in a very efficient and positive way through my practicum placements.

5.0 Conclusion

The findings in my thesis highlighted how having knowledge about the client`s use of technology and how to transfer this to the music therapy is useful. The overall tendencies are that the music therapists experienced technology as a positive contribution and as a resource when working with youths and adolescents in music therapy.

Despite how my findings showed how my informants used and reflected on the use of music technologies, I am left with a question at the end of this research process. What does the term music technology mean in a music therapeutic context? I have tried to reconcile the two concepts of technology as physical objects and non-physical concepts and link my informants' testimonies to relevant literature. Hopefully I have contributed to shedding light on some aspects of how music technology can be applied to music therapy practice when working with youths and adolescents and to how we discuss the term "music technology" in music therapy contexts.

For future research I would like to interview clients to explore how they experience the use of music technologies in music therapy and how they reflect on their use of music technology in relation to how they listen to and play music, and in relation to identity and cultural and social affiliation. Also I would like to investigate how some music technologies that are aimed specifically at modulating sound can be used methodologically with this client population and interview both music therapists and clients to explore how they experience this process.

References

Aigen, K. (2005). *Playin' in the band: a qualitative study of popular music styles as clinical improvisation* (Vol. 3). New York: Barcelona Publishers.

Aigen, K. (2007). In defense of beauty: A role for the aesthetic in music therapy theory: Part I: The development of aesthetic theory in music therapy. *Nordic Journal of Music Therapy, 16*(2), 112-128.

Aldridge, D. (2005). *Case study designs in music therapy*. London: Jessica Kingsley publishers.

Alvesson, M., & Sköldberg, K. (2009). *Reflexive methodology : new vistas for qualitative research*. London: Sage.

Ansdell, G. (2002). Community Music Therapy & the Winds of Change. [online]. *Voices: A World Forum for Music Therapy, 2*(2), 26.

Benveniste, S., Jouvelot, P., & Renaud, M. (2009). Wii Game Technology for Music Therapy: A First Experiment with Children Suffering from Behavioral Disorders. [online]. *MINES Paris Tech*, 1-5.

Bruscia, K. E. (1998). *Defining Music Therapy* (Vol. Second): Gilsum, USA. Barcelona Publishers.

Bull, M. (2007). *Sound moves: iPod culture and urban experience*. London: Routledge.

Bunne Music. (2013). Retrieved 11.04.2013, 2013, from http://www.bunnemusic.com/?page=prodinfo&id=15

Burns, D. (2007). Response to Elaine Streeter's Reactions and Responses from the Music Therapy Community to the Growth of Computers and Technology. Retrieved 25.08.2011: http://voices.no/?q=content/response-elaine-streeters-reactions-and-responses-music-therapy-community-growth-computers-a

Craig, D. (2009). Exploring music preference: Meaningfulness of music as a function of emotional reactions. *Nordic Journal Of Music Therapy, 18*(1), 57-69.

Crowe, B. J., & Rio, R. (2004). Implications of Technologuy in Music Therapy Practice and Research for Music Therapy Education: A review of Literature. *Journal of Music Therapy, 41*(4), 282-320.

DeNora, T. (2000). *Music In Everyday Life*: The Press Syndicate of The Univeristy Of Cambridge, The Pitt Building, Trumpington Street, Cambridge, United Kingdom.

Forchammer, B. H. (2006). The Woman who used her Walking Stick as a Telephone: The Use of Utilities in Praxis. In A. Costall & O. Dreier (Eds.), *Doing things with things: the design and use of everyday objects* (pp. 131-146). Aldershot: Ashgate.

Garred, R. (2006). *Music as therapy: a dialogical perspective*. Gilsum, N.H.: Barcelona Publishers.

Gorman, M., Lahav, A., Saltzman, E., & Betke, M. (2007). A Camera-Based Music-Making tool for Physical Rehabilitation. *Computer Music Journal, 31*(2), 39-53.

Gruchot, S. (2009). *Bruk av effektpedaler på elfiolin under jazzimprovisasjon* Universitetet i Agder, Kristiansand.

Hahna, N. D., Hadley, S., Miller, V. H., & Bonaventura, M. (2012). Music technology usage in music therapy: A survey of practice. *The Arts in Psychotherapy, 39*(5), 456-464.

Hornby, A. S., Lea, D., Ashby, M., Turnbull, J., Parkinson, D., & Phillips, P. (2010). *Oxford advanced learner's dictionary of current English*. Oxford: Oxford University Press.

Hunt, A., Kirk, R., & Neighbour, M. (2003). MidiGrid: Past, Present andFuture. *Proceedings of the 2003 Conference on New Interfaces for Musical Expression (NIME-03), Montreal, Canada*, 135-139.

Hunt, A., Kirk, R., & Neighbour, M. (2004). Multiple Media Interfaces for Music Therapy. *Multimedia IEEE, 11*(3), 50-58.

Huq, R. (2006). *Beyond subculture: pop, youth and identity in a postcolonial world*. London: Routledge.

Johns, U. T., Schei, E., Solli, H. P., Kleive, M., Stene, I., Torbergsen, T., et al. (2009). *Musikk i Psykisk helsearbeid med barn og unge*. Oslo: NMH-publikasjoner.

Kirk, R., Hunt, A., Hildred, M., Neighbour, M., & North, F. (2002). *Electronic Musical Instruments - a role in Music Therapy?* Paper presented at the Music Therapy in the 21´st century: A contemporary Force for Change.

Knight, A., & LaGasse, A. B. (2012). Re-Connecting to Music Technology: Looking Back and Looking Forward. *Music Therapy Perspectives, 30*(2), 188-195.

Kolstad, I.-K. (2008). *The Bad Dream - om bruk av computerstudioet som primæraktivitet i musikkterapi, med en ungdom i barnevernet.* Unpublished Master, Universitet i Bergen, Bergen.

Krüger, V. (2000). The Use of Information Technology in Music Therapy. *Norsk Tidsskrift for Musikkterapi, 9*(2), 77-83.

Krüger, V. (2007). Music as Narrative Technology. [online]. *Voices: A World Forum for Music Therapy, 7*(2).

Krüger, V. (2009). Musikkterapi som hjelp til selvhjelp i kontekst av barnevernsarbeid. In E. Ruud (Ed.), *Musikk i psykisk helsearbeid med barn og unge* (pp. 171, 186). Oslo: NMH-publikasjoner, skriftserie fra Senter for musikk og helse i samarbeid med Unipub.

Kvale, S. (2001). *Det kvalitative forskningsintervju*. Oslo: Ad notam.

Kvale, S., & Brinkmann, S. (2009). *Interviews: learning the craft of qualitative research interviewing*. Los Angeles, Calif.: Sage.

Machover, T. (2004). Shaping minds musically. [Journal]. *BT Technology Journal, 22*(4), 171-179.

Magee, W. L. (2006). Electronic technologies in clinical music therapy: A survey of practice and attitudes. *Technology and Disability IOS Press, 18*, 139-146.

McFerran, K. (2010). *Adolescents, music and music therapy: methods and techniques for clinicians, educators and students*. London: Jessica Kingsley Publishers.

Middleton, R., Herbert, T., & Clayton, M. (2003). *The Cultural study of music : a critical introduction*. New York: Routledge.

Moody, C. K., Qureshi, A. M., Singh, V., Krager, J. E., Porlier, J. E., Wood, K. L., et al. (2005). USA Patent No.

Norsk Samfunnsvitenskapelige Datatjeneste. (2011). Retrieved 01.09.2011, from http://www.nsd.no

Patel, R., & Davidson, B. (2003). *Forskningsmetodikens grunder: att planera, genomföra och rapportera en undersökning*. Lund: Studentlitteratur.

Patton, M. Q. (2002). *Qualitative research & evaluation methods*. Thousand Oaks, Calif.: Sage Publications.

Post og teletilsynet. (2011). nettvett.no. Retrieved April, 14, 2013, from http://www.nettvett.no

Rolvsjord, R. (2010). *Resource-Orientd Music Therapy in Mental Health Care*: Barcelona Publishers.

Rolvsjord, R., Gold, C., & Stige, B. (2005). Research Rigour and Therapeutic Flexibility: Appendix. [Appendix to the article Research Rigour and Therapeutic Flexibility by Randi Rolvsjord, Christian Gold and Brynjulf Stige, published in NJMT 14(1) 2005.]. *Nordic Journal of Music Therapy*.

Ruud, E. (1997). *Musikk og identitet* (4. 2009 ed.). Oslo: Universitetsforlaget AS.

Ruud, E. (1998). *Music Therapy, Improvisation, Communication and Culture*: Barcelona Publisher.

Ruud, E. (2000). "New Musicology", Music Education and Music Therapy. [online]. *Nordic Journal of Music Therapy*.

Ruud, E. (2005a). *Lydlandskap - om bruk og misbruk av musikk*: Fagbokforlaget.

Ruud, E. (2005b). Philosophy and Theory of Science. In B. L. Wheeler (Ed.), *Music therapy research* (Second ed., pp. 33-58). Gilsum, N.H.: Barcelona Publishers.

Skånland, M. S. (2009). (Mobil) musikk som mestringsstrategi. In E. Ruud (Ed.), *Musikk i psykisk helsearbeid med barn og unge* (pp. 113-130). Oslo: Norges musikkhøgskole I samarbeid med Unipub.

Skarpeid, G. (2009). Daglig musikklytting. In E. Ruud (Ed.), *Musikk i psykisk helsearbeid med barn og unge* (pp. 131-152). Oslo: Norges musikkhøgskole I samarbeid med Unipub.

Stensæth, K., & Ruud, E. (2012). Interaktiv Helseteknologi - nye muligheter for musikkterapien? *Musikkterapi, 2012*(2), 6-19.

Stern, D. N. (1985). *The interpersonal world of the infant: a view from psychoanalysis and developmental psychology*. New York: Basic Books.

Stern, D. N. (2010). *Forms of vitality: exploring dynamic experience in psychology, the arts, psychotherapy, and development*. Oxford: Oxford University Press.

Stige, B. (2002). *Culture-Centered Music Therapy*. Gilsum NH: Barcelona Publishers.

Stige, B., Malterud, K., & Midtgarden, T. (2009). Toward an agenda for evaluation of qualitative research. *Qual Health Res, 19*(10), 1504-1516.

Streeter, E. (2007). Reactions and Responses from the Music Therapy Community to the Growth of Computers and Technology - Some Preliminary Thoughts. [online]. *Voices: A World Forum for Music Therapy, 7*(1).

Swingler, T. (2002). *Where is the "music" in music therapy?* Oxford, England: MusicTherapyWorld.Net Witten, Germany.

Tervo, J. (2005). Music Therapy with Adolescents. [online]. *Voices: A World Forum for Music Therapy, 5*(1).

von Appen, R. (2007). On the aesthetics of popular music. *Music Therapy Today, VIII* (1), 5-25.

Waksman, S. (1999). *Instruments of Desire*: Harvard University Press, Cambridge Massachusetts, London , England.

Wheeler, B. L. (2005). Designing Quantitave Research *Music Therapy Research* (Second ed., pp. 112-137). Gilsum, N.H.: Barcelona Publishers.

Wheeler, B. L., & Kenny, C. (2005). Priciples of Qualitative Research. In B. L. Wheeler (Ed.), *Music Therapy Research* (Second ed., pp. 59-71). Gilsum, N.H.: Barcelona Publishers.

Wigram, T. (2004). *Improvisation: methods and techniques for music therapy clinicians, educators and students*. London: J. Kingsley Publishers.

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

Willis, P. E. (1978). *Profane culture*. London: Routledge & Kegan Paul.

Winnicott, D. W. (1971). *Playing and reality*. New York: Basic Books.

Appendix 1

Interview Guide

The use of music technology
- How do you define music technology?
- Do you use music technologies in your practice?
- If yes, what are, the pros and cons of using music technologies in your practice?
- Why do you use music technology?
- If no, why is not music technology a part of your practice?
- How can clients benefit from the presence of a music therapist skilled in using music technology?
- How can music therapists benefit from the use of music technology in music therapy with clients?
- Can the use of music technology have a negative effect, can it cause harm?

Music technology's relationship to clients and issues of music therapy education in Norway.
- How do you place music technology in the Norwegian music therapy tradition?
- How do you place music technology in the Norwegian music therapy educational system?
- Are there any political issues around music technology in your work environment?
- What role does gender play in the issue of presence or the lack of presence of music technology in Norwegian music therapy practices?
- Do you experience that there exist any preconceptions around how music therapy music should be?
- How do you experience the use of the term "music therapy music", and what does it mean to you?

Appendix 2

Information letter

<u>Request to participate in interview in connection with a Master Thesis</u>

I am a graduate student in music therapy at the University of Bergen and I am now working on my final thesis. The theme of the thesis is music technology, and I will examine how music therapists who work with young people use music technology in their work, and their attitudes and thoughts about the issue. I am interested in finding out how and why music therapists take advantage of music technologies in their work with children and adolescents in Norway.

<u>The preliminary title for the thesis is:</u>
Music technology and music therapy: A study of the Possibilities, potential and problems around the use of music technologies by Music Therapist`s working with young people in Norway.

<u>Preliminary research question:</u>
How can music technologies help music therapists to engage with and assist clients in the Therapeutic process?

To investigate this, I want to interview four music therapists (two men and two female) who work with youths and adolescents.

<u>The research questions are:</u>

The use of music technology
- How do you define music technology?
- Do you use music technologies in your practice?
- If yes, what are, the pros and cons of using music technologies in your practice?
- Why do you use music technology?
- If no, why is not music technology a part of your practice?
- How can clients benefit from the presence of a music therapist skilled in using music technology?
- How can music therapists benefit from the use of music technology in music therapy with clients?
- Can the use of music technology have a negative effect, can it cause harm?

Music technology's relationship to clients and issues of music therapy education in Norway.
- How do you place music technology in the Norwegian music therapy tradition?
- How do you place music technology in the Norwegian music therapy educational system?
- Are there any political issues around music technology in your work environment?

- What role does gender play in the issue of presence or the lack of presence of music technology in Norwegian music therapy practices?
- Do you experience that there exist any preconceptions around how music therapy music should be?
- How do you experience the use of the term "music therapy music", and what does it mean to you?

The Interview will be time restricted to 60 minutes and will be recorded. It is voluntary to join and participants have the opportunity to withdraw at any time along the way, without having to explain this any further. If a participant withdraws, all data collected about you will be anonymous. The information will be treated confidentially, and no individuals will be recognized in the completed task. The information is anonymous and the recordings are deleted when the task is completed by the end of 2012.

If you want to be part of the interview, it is nice if you sign the enclosed consent form and send it to me.

If you have any questions please call me at……… or send an e-mail to........ You can also contact my supervisor Jill Halstead at the Grieg Academy, Department of Music Therapy at the telephone number …......

The study is reported to the Norwegian Social Science Data Services (NSD).

Sincerely,

René Misje
Heien 25
5037 Bergen

Appendix 3

Consent Statement

I have received information about the study of music therapy and music technology and would like to participate.
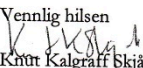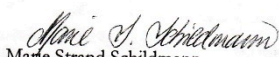
I would like to be anonymous in this study   YES   NO   (please circle)

Signature ... ...

Phone ... ...

Appendix 4

NSD letter of approval

Appendix 5

Confirmation of new end date

Email:

On 1/21/13 2:06 PM, "Marie Schildmann" <marie.schildmann@nsd.uib.no> wrote:

Hei

Jeg viser til endringsmelding for prosjektet 'Music technology and music therapy...', mottatt den 09.10.2012. Jeg beklager sen tilbakemelding.

Endringen er registrert og 31.05.2013 er satt som ny dato for prosjektslutt. Du vil da motta en ny statushenvendelse.

--
Vennlig hilsen
Marie S. Schildmann
Seniorrådgiver

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