Towards lifelong musical enjoyment: The application of the Self-Determination Theory and musical understanding during individual instrumental lessons

by

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Thesis submitted in complete fulfilment for the degree of Masters in Music (100% Thesis) in the Faculty of Arts and Social Sciences

at

Stellenbosch University

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December 2017

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Abstract

Music learners, in some cases, cease the learning of their musical instruments. This may be due to various factors. However, many of the reasons can be associated with diminished enjoyment. For learners to enjoy music lifelong, benefitting from the value it can add to their lives, ways must be found for them not wanting to cease their learning. It is therefore necessary that music teachers find ways in which enjoyment can be maintained. This was the main purpose of this study. It aimed to determine how instrumental music teachers can apply the Self-Determination Theory (SDT) and teach musical understanding to promote musical enjoyment.

The main question was partially addressed through a literature review of both SDT and musical understanding, and mainly through multiple case studies of four instrumental teachers' learners and their lessons. These lessons took place at four different primary schools in the Western Cape. The researcher observed and transcribed the lessons, all the learners completed a SDT questionnaire, and commented on their experience of enjoyment. The transcriptions of lessons and the comments that learners wrote were coded according to a pre-determined framework of SDT and musical understanding. The qualitative data from the questionnaires were used to give an overview of the four teachers' support of SDT, and to support the findings from the qualitative data.

Teachers' support of SDT and musical understanding were found to contribute towards musical enjoyment. Furthermore, specific ways in which teachers can do this, came from examples of the lessons and learners' written comments. It was also found that the correct actions according to the parameters of this study do not always guarantee that learners feel supported in a SDT sense, as there may possibly be other factors that can impact their experiences of their music learning. With regards to musical understanding, it was found that the teachers in this study prioritise it in their lessons. However, learners lacked an integrated understanding of theory and practice. Some ways of thinking and knowing seemed to be neglected in instrumental lessons. Further study is recommended in how learners perceive their teachers. Another opportunity for further research is learners showing introjected regulation, despite their teachers' actions that should theoretically result in more internalised forms of motivation.

Opsomming

Musiekleerders staak in sommige gevalle hulle instrumentale onderrig. Verskeie faktore kan hiertoe bydra. Menige van hierdie redes hou egter verband met 'n afname in genot. Vir leerders om musiek lewenslank te geniet en voordeel te trek uit die waarde wat dit tot hulle lewens kan voeg, moet maniere gevind word om hulle aan te moedig om nie hulle instrumentale onderrig te staak nie. Dit is dus nodig dat musiekonderwysers maniere vind om leerders hul genot te laat behou. Dit is dan ook die hoofdoel van hierdie studie. Die studie poog om vas te stel hoe musiekonderwysers die selfdeterminasieteorie (SDT) kan toepas terwyl musikale begrip aan leerders geleer word sodat musikale genot bevorder word.

Die hoofvraag is gedeeltelik deur 'n literatuuroorsig van sowel SDT as musikale begrip ondersoek, en hoofsaaklik deur veelvoudige gevallestudies van vier instrumentale onderwysers en hul leerders se lesse. Hierdie lesse het by vier verskillende laerskole in die Wes-Kaap plaasgevind. Die navorser het die lesse waargeneem en getranskribeer en al die leerders het 'n SDT-vraelys voltooi en kommentaar gelewer op hulle ervaring van musikale genot. Die transkripsies van lesse en die leerders se geskrewe kommentaar is volgens 'n vooropgestelde raamwerk van SDT en musikale begrip gekodeer. Die kwantitatiewe data uit die vraelys is gebruik om 'n oorsig oor SDT-ondersteuning in die leerders te gee en om die bevindings uit die kwalitatiewe data te staaf.

Die resultate bewys dat onderwysers se ondersteuning van SDT en musikale begrip bydra tot musikale genot. Verder dui voorbeelde uit die lesse en geskrewe kommentaar deur die leerders spesifieke maniere aan waarop onderwysers laasgenoemde kan bewerkstellig. Daar is ook bevind dat onderwysers se korrekte optredes volgens die maatstawwe van die studie nie altyd kan waarborg dat leerders ondersteun voel op 'n SDT-gebied nie, aangesien daar ander moontlike faktore is wat hulle ervarings van die musikale leerproses beïnvloed. Wat musikale begrip betref, is daar bevind dat die onderwysers in hierdie studie dit in hulle lesse prioritiseer. Leerders het egter getoon dat 'n geïntegreerde begrip van teorie en praktyk steeds kortkom. Sommige wyses van musikale dink en weet blyk verwaarloos te word in instrumentale onderrig. Verdere studie in leerders se persepsie van hul onderwysers word aanbeveel. Daar is ook die moontlikheid vir verdere navorsing in hoekom leerders toon dat hulle staatmaak op introjeksie-regulasie ten spyte van onderwysers se optrede wat teoreties tot meer geïnternaliseerde tipes motivering behoort te lei.

Acknowledgements

I would like to thank the following people, who contributed greatly towards the completion of this thesis:

- My supervisor, Danell Herbst, for her enthusiasm towards this topic, and her guidance and advice in completing it.
- My husband, Nico-Ben Janse van Rensburg, for his help with statistical analysis, and most of all for his support and patience throughout this process.
- My family, for their encouragement and prayers.
- My mother-in-law, Mrs Carine Janse van Rensburg, for language editing.
- The teachers, learners, and parents from the different schools, for their willingness to participate. Their cooperation and support for the research made the data collection a joy.

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List of abbreviations

SDT	Self-Determination Theory
BPNT	Basic Psychological Needs Theory
OIT	Organismic Integration Theory
CET	Cognitive Evaluation Theory
ANOVA	ANalysis Of VAriance
IMI	*Intrinsic Motivation Inventory*
SRQ	*Self-Regulation Questionnaire*
BPNSFS	*Basic Psychological Needs Satisfaction and Frustration Scale*

Chapter 1 : Introduction

The researcher has been involved in violin teaching in a community project, and made certain observations. With the challenges that musical tuition offers, it is often difficult for a teacher to maintain the enjoyment aspect of a lesson. Learners often seem to lose motivation to pursue instrumental tuition when the technical challenges become more demanding. In the researcher's experience thus far, it has happened that learners start their instrumental tuition with enthusiasm, but drop out at a later stage. This statement is supported by Davidson, Howe, and Sloboda (1995/1996:40): "Each year, thousands of children begin learning to play musical instruments, yet few continue with their study to become competent players". In *Music Matters,* David Elliott (1995:134) holds that music teachers should develop learners' musicianship – "the key to lifelong musical enjoyment". In the second edition of *Music Matters* (Elliott & Silverman, 2015:387)*,* however, the term *musicianship* is substituted by *musical understanding,* which entails musicianship and listenership (*Ibid.*:206). According to Elliott (1995; 2015; 2016), music teachers' task is not only in and for the present, but should also be concerned with enabling students to continue their musicianship in the future. From this philosophy, music education has a long-term goal, and musical enjoyment has a central place.

It is made clear by Elliott (1995; 2005; 2015) why music education is important and what it should comprise, and he provides a *how to* (1995; 2015) in the form of musical activities and ways of thinking that can promote musicianship. What is, however, still lacking from this account is specific methods of engaging with students and a thorough understanding of their psychological processes. The problem of music pupils losing motivation and dropping out of lessons is still prevalent in many settings, and is thus worthy of thorough investigation. According to Davidson *et al.* (1995/1996:40), it is of "key importance" to understand the environmental factors that may encourage learners' persistence. In the context of individual instrumental tuition, it is especially challenging to maintain enjoyment, as technical aspects demand a certain amount of discipline and earnestness. In an individual setting, there are also fewer opportunities for social engagement which could possibly contribute to enjoyment. It thus seems worthwhile to explore the psychology of motivation as a possible channel through which to address this shortcoming.

The Self-Determination Theory (SDT) is a motivational theory from the positive psychology branch. Positive psychology asks what the "nature" of the "effectively functioning person" is, who "successfully applies evolved adaptations and learned skills" (Sheldon & King, 2001:216). SDT similarly seeks to illuminate psychological processes that will "promote optimal functioning and

health" (Deci & Ryan, 2000:262), as humans are shown to orient towards "vitality, integration, and health" (*Ibid*.:229). SDT also has an organismic-dialectical meta-theory, which posits that although people have an innate tendency towards vitality, these processes are largely dependent on the social environment – whether it provides the necessary nutriments for optimal human functioning (*Ibid*.:262). These nutriments are the three basic psychological needs for competence, relatedness and autonomy. Within SDT, there are six mini-theories which were each developed to explain one facet of motivation or personality (SDT, 2016). All the mini-theories are overviewed in the literature review, with special focus on those selected for this study.

1.1 Research problem

SDT's notion of people's tendency towards vitality and growth connects to Elliott's (1995:120) belief that humans engage in challenging activities to extend their capacities with the result of self-growth. Music should thus add value to the life of learners through self-growth and enjoyment (*Ibid.*). SDT's required nutriments from the environment may provide a way to address the motivational issue often encountered in the individual instrumental lesson. With the goal of encouraging lifelong musical pursuit, the SDT could thus possibly be examined as a useful tool.

This lead to the following main question:

How can the Self-Determination Theory, in combination with the teaching of musical understanding, facilitate musical enjoyment in the individual instrumental lesson to encourage lifelong musical enjoyment?

The following subquestions were asked:
- How can teachers promote self-determined behaviour in an individual instrumental setting?
- How can musical understanding be taught?
- More specifically, in what ways can musical understanding be taught in the individual instrumental lesson?
- How does promoting self-determined behaviour and the teaching of musical understanding contribute to musical enjoyment?

1.2 Objectives

The main objective of this study is to examine how SDT support in combination with the teaching of musical understanding (as derived from Elliott's praxial philosophy) can contribute to enjoyment in

individual instrumental lessons. The desired goal of this enjoyment is that learners may enjoy music lifelong. The latter could not be determined in this study, but was predicted by the extent to which a learner's motivation to learn an instrument was self-determined.

1.3 Research philosophy

The underlying philosophy of this research is pragmatism. This research philosophy is the only one that allows for mixed methods, and can include both quantitative and qualitative data (Cresswell, 2003:12). This philosophy is oriented towards practices within the real world (*Ibid.*:6), and holds the belief that the research question should determine the most appropriate methods to employ (Dudovskiy, 2016). Interpretivism and positivism lies within the pragmatic philosophy of this study. This is due to the use of qualitative and quantitative data, as interpretivism is associated with qualitative data, and positivism with quantitative data. The pragmatic philosophy is appropriate for this study, as the aim is to determine ways of promoting lifelong musical enjoyment, from what is taking place in the real-world practice of teaching musical instruments.

1.4 Research approach

A mixed methods approach was followed in this study. This approach may be characterized by both "predetermined and emerging methods", "open- and closed-ended questions", "multiple forms of data drawing on all possibilities", and "statistical and text analysis", and is based on "pragmatic grounds" (Cresswell, 2003:17, 18). The qualitative nature of this study is in the interpretations and descriptions of musical understanding, learner enjoyment, as well as the extent to which teachers apply the SDT. The quantitative section is the standardised SDT questionnaires, with multiple choice questions, which are statistically analysed. The study is also empirical, as it relies on primary data.

1.5 Research design

Research was conducted as case studies of different individual instrumental lessons. A case study refers to the investigation of a single unit with multiple variables (Babbie *et al.*, 2001:281) – in this case four different music teachers served as the units. They each had four to six learners, which, together with the different aspects of the lessons, were the variables.

1.6 Research methodology

Different teachers' lessons were observed, and their pupils completed questionnaires. This included lessons from four different teachers in four different schools in the suburbs of Cape Town. The study focused on the age group between nine and 13 years old, as learners at these ages were likely to be able to complete a questionnaire, and it is important in those early years that the foundation of musical understanding is laid, and that pupils should be motivated to continue to pursue music in later years. The different aspects of the lessons were examined in the following ways:

Musical understanding:

The general question of how musical understanding can be taught was answered through the literature on musicianship/musical understanding. The specific ways in which it can be taught in individual lessons were observed in the different teachers' lessons. The lessons were video recorded so that it could be analysed afterwards. The videos were transcribed into text. Codes were assigned to events, and the codes were organised under subthemes of different ways of musical thinking and knowing, under the theme musical understanding. The transcriptions were imported into ATLAS.ti, an analysis program, and the codes were assigned to events.

Self-Determination Theory:

The mini-theories within SDT which were applied were Cognitive Evaluation Theory (CET), Organismic Integration Theory (OIT), and Basic Psychological Needs Theory (BPNT). CET was chosen on the premise of the goal of music teaching to nurture "intrinsic motivation" and passion (Elliott & Silverman, 2015:203). OIT was chosen, because not all aspects of music learning will necessarily be intrinsically motivating, but are also necessary for the learning process, and therefore needs to become internalised. BPNT is important, as teachers need to attend to learners' basic psychological needs to ensure their well-being.

In the lesson observations, the SDT support that teachers (consciously or unconsciously) provide to pupils was analysed by applying parameters that can be applied to the three mini-theories used in this study, within SDT. Autonomy support can for instance be observed by whether teachers give pupils the opportunity to make choices in their lessons. It falls under the BPNT, and is also a necessary criterion for internalisation (OIT), and intrinsic motivation (CET). The analysis took place through the same process as described above. The three mini-theories are the main themes, their components are the subthemes, and codes were assigned within the subthemes. They were also assigned to events taking place in the videos and in the textual observations.

The learners answered questionnaires. The questionnaires also examined how they unconsciously perceive the application of SDT in their lessons. To determine the learners' perceptions, standardised questionnaires found on the website of the SDT organisation, *SDT – Self-Determination Theory* (2016) were used and where necessary, adapted according to the context of individual instrumental lessons. The *Intrinsic Motivation Inventory* (IMI) addresses CET, which deals with intrinsic motivation, and the *Self-Regulation Questionnaire* (SRQ) addresses OIT, which deals with different degrees of extrinsic motivation. The *Basic Psychological Needs Satisfaction and Frustration Scale* (BPNSFS) addresses the BPNT – general fulfilment of the basic psychological needs is essential for optimal functioning. In conjunction with SDT literature as well as SDT in music education literature, the question of how the SDT can be applied to individual lessons was examined through the two methods discussed.

Learners' enjoyment:

In the questionnaires, learners also had to rate their general level of musical enjoyment in their lessons. A section of the questionnaire asked questions like "When I think about my lessons I feel this way". Learners had to choose between a sad, neutral or happy face, and could add additional comments. The learners' answers were also assembled into documents per teacher, and imported to ATLAS.ti for coding, as many of the answers contain the themes within SDT and musical understanding.

The SDT and musicianship studies' results were compared to the learners' self-reported enjoyment, and the researcher drew correlations between the results. This answered the question of how SDT combined with the teaching of musical understanding may contribute to musical enjoyment.

1.7 Terminology

Musical understanding (based on Elliott and Silverman's (2015) definition)
Musical thinking and knowing in action while making and listening to music. It is procedural in nature, meaning that it is predominantly demonstrated through musical actions, although verbal concepts also contribute towards it.

Self-Determination Theory (SDT)
A positive psychological theory of human motivation and personality. It believes in humans' innate desire to grow and develop psychologically, and at the same time states that the three basic psychological needs (competence, relatedness, autonomy) must be fulfilled for humans to function at their best.

Lifelong musical enjoyment

It is theorised by Elliott (1995:134) that musical understanding will lead to lifelong musical enjoyment, which is held in this study as the goal of teaching music. It is therefore important that learners are encouraged and supported not to cease their musical learning, as it will develop musical understanding, which will hopefully lead to lifelong enjoyment of music. Lifelong musical enjoyment may take the form of making or listening to music. The criteria for enjoyment are activities that allow for optimal experience (Elliott & Silverman, 2015), thereby connecting it to Flow theory.

1.8 Chapter outline

Chapter one provides an overview of the study. It shortly states the background, research questions, and methodology of the study. The latter is a condensed version of chapter 3. Some frequently used terminology is clarified.

Chapter two is the literature review, which discusses the literature on SDT and musical understanding, and brings the two together. Self-Determination Theory is overviewed in its broad sense, and all the mini-theories listed. The three mini-theories applied to this study (BPNT, OIT and CET) are discussed in more detail. Musical understanding is discussed through a praxial philosophy lens, as held by Elliott, but writings by other authors on the subject are also reviewed and discussed. The different ways of musical knowing and understanding (as put forth by Elliott and Silverman) are explained, as it informs the codes for musical understanding. Flow, and its connections to the praxial philosophy of musical understanding, is also reviewed. Connecting SDT with musical understanding reviews literature on the applications of SDT in music education, music teachers, the connections and divergences between SDT and Flow, and mindfulness (SDT) versus self-esteem (Elliott). A general summary of connections between SDT and musical understanding, as derived by the researcher is provided. The literature study is concluded with an explanation of how the codes were drawn from the literature.

Chapter three discusses the research methodology in-depth, including the research philosophy, approach, design, and methodology. It also addresses issues like validity and reliability. The ethical considerations are stated, as well as how the conducting of a pilot study informed the set-up of the final data collection.

Chapter four presents the results, by generally discussing the themes, subthemes and codes, and providing suitable examples from the different cases. Discussion of the data is integrated with the presentation thereof, with conclusive paragraphs at the end of main or subsections, drawing the important findings together.

Chapter five presents the conclusions and recommendations. The research questions are answered by drawing upon the literature review, but mostly from the data that was collected. Other issues that emerged from the data are mentioned, as well as existing literature relevant to it. It is not discussed in-depth, but rather unlocked as possibilities for future research.

Chapter 2 : Literature Study

This chapter examines the two main components on which the study is built: the Self-Determination Theory and musical understanding. The Self-Determination Theory (SDT) is mainly considered in the broad sense. There is, however, firstly an overview of the many predecessors of the SDT and other current motivational theories, so that convergences and differences between previous or other current theories can be shown. Behaviourism, psychoanalysis, humanism, achievement motivation, role modelling, Herzberg employment motivation, personality development theories, and Hull are briefly discussed. Musical understanding is considered through a praxial philosophy lens, as held by Elliott. SDT and musical understanding are drawn together, where the literature on the applications of SDT in music education is presented, as well as music teachers, the relationship between SDT and Flow, mindfulness versus self-esteem, and a general summary of connections between SDT and musical understanding.

2.1 Self-Determination Theory (SDT)

2.1.1 Motivational theories

Motivation is a widely used and discussed concept. Oxford Dictionaries (2016) define it as "[t]he (conscious or unconscious) stimulus for action towards a desired goal, esp. as resulting from psychological or social factors; the factors giving purpose or direction to human or animal behaviour". The online Collins English Dictionary (2016) similarly states that motivation is "the process that arouses, sustains and regulates human and animal behaviour". It can also be "the process by which goal-directed activity is instigated or sustained" (Evans, 2015:65). The following is stated by Berlyne (1975:77) about motivation:

> An adequate theory of motivation must identify the conditions that generate pleasure and discomfort, that incite people and animals to action or reduce them to quiescence, that give something reward value or punishment value, that determine what goal or purpose will be adopted. It must analyse the part played by these factors in spontaneous, as well as instructed, behaviour. It must have something to say about the forms of motivation, bound up with basic biological needs, that human beings share with animals, as well as about the uniquely human forms of motivation that underlie social interaction and social organisation, work and play, philosophy, science and art.

Motivation is thus an important concept, as it can be viewed as the driving force behind actions. A proper knowledge of human motivation would therefore be useful in numerous practices.

Several theories within psychology examine human motivation. In the brief discussions to follow, all the theories listed are explored, and then the contribution of each theory towards the SDT is stated and

discussed. This is so that the reader can gain an overview of different motivational theories, and that similarities and differences can be pointed out.

- Behaviourism explains motivation by means of biological human drives. John B. Watson was a pioneer in this movement, presenting psychology as a natural science, only studying what can be observed (Möller, 1987:6; Watson, 1926). Accordingly, the focus is on objectivity (Watson, 1926:456; Möller, 1987:6). Behaviourism holds that people are pushed and pulled by "stimuli" and "response" (Möller, 1987:6; Watson, 1926:454). Berlyne (1975:72) states that behaviourism deals with "biological aspects of behaviour"; the role of behaviour in adaptation, and how "adaptive and maladaptive consequences" can in turn be traced back to behaviour. Discoveries about behaviour are related to discoveries within other biological domains (*Ibid.*). The environment, and conditioning which takes place within it, is the only explanation for human behaviour; genetics plays no role (Möller, 1987:56). Reinforcements play an important role in behaviour in this view (Dietrich & List, 2016:253, 254). Children are believed to be born with only three primary emotions or reflexes: fear, anger, and love (Möller, 1987:56; Watson, 1926:457). Watson (1926:456) did not view humans as innately vital; thus, increasing complexity in behaviour could only be accounted for by conditioned responses.

- Skinner is most often associated with the psychological field of neo-behaviourism. Skinner (1953:31) believed that looking "inside an organism" to explain behaviour can obscure the "variables which are immediately available for scientific analysis". He posited that people do not have a natural tendency for integration and "inner organization", but that these tendencies are attributable to environmental factors (Ryan, 1995:402). Behaviour is a "function" of "variables" "outside the organism"; in its environment and environmental history (Skinner, 1953:31). According to Skinner, in dialogue with Evans (1968:7, 8), society "imposes" people's awareness and observation of themselves and their actions on them. Skinnerians are especially concerned with the effect of "reinforcing events" on behaviour, but they are not asking why "some events have reinforcement value" and others do not, and how the effectiveness of a reinforcer may vary with an organism's motivational state (Ryan, 1995:402). One can interpret these views as only accounting for environmental causes of human behaviour, and thus implying that humans are predominantly motivated by external forces. It does, however, not account for innate human motivation.

- When discussing psychoanalysis, Freud comes to mind. In psychoanalysis, people's behaviour is predominantly determined by unconscious instincts (Möller, 1987:23). A

person's end goal in life is being in a state of homeostasis (Buhler, 1971:381). Freud theorised that human conflicts are a result of human wishes that clash with "realities' obstacles" and societal demands (*Ibid.*). He coins this principle the "pleasure principle" – humans have a tendency towards the pleasure principle, but it is often opposed by external forces, and the outcome is thus not always consistent with the pleasure principle (Freud *et al.,* 1966:9, 10). Freud (1933:81, 82) describes the conscience as an "observing function" of the ego, and thus calls it the "super-ego". Guilt is seen as an expression of the tension between the ego and the super-ego (*Ibid.*:83). According to Freud (*Ibid.:*84) however, the human conscience, in contrast to sexuality, is not present from the beginning. Small children do not have inhibitions against their "pleasure-seeking impulses", and the super-ego role is therefore at first played by an external source – by their parents (*Ibid.*). Parents exert their control by punishment threats, which children fear because of the possible loss of parental love (*Ibid.*). Later, the "external restrictions" are introjected, and the super-ego thus takes the role of the parents by threatening the ego (*Ibid.:*85). Freud (*Ibid.:*85, 86) coins the process of change from parental control to super-ego "identification", in which one ego (the child) imitates the other (the parent). In psycho-analysis, identification is also the earliest "expression of an emotional tie"; a boy will for instance want to be like his father, and takes his father as a "model" (Freud, 1959:37).

- Humanistic psychology pays special attention to the "healthy person's end goal in life" (Buhler, 1971:381), or as "[striving for an] upper level of capabilities" (Simons *et al.*, 1987:par. 2). Amongst the prominent pioneers of this idea is Abraham Maslow, with the concept of self-actualisation. Maslow (1970:ix) held that "in addition to" what the psychologies of his time said about human nature, humans have a "higher nature", which is also part of the human instinct. He critiqued the theories of the time for that it did not account for the "healthy human being's functioning" (Buhler, 1971:378). He also asserted that human nature is "holistic", in contrast to Freud's psycho-analysis (Maslow, 1970:ix). According to Maslow (*Ibid.*:xiii), fulfilment of basic human needs is not only desirable, but essential to avoid illness and psychopathology. Maslow is especially known for his hierarchy of needs: Physiological; safety; love, affection and belongingness; esteem; and self-actualisation. Figure 2-1 is how the hierarchy is presented:
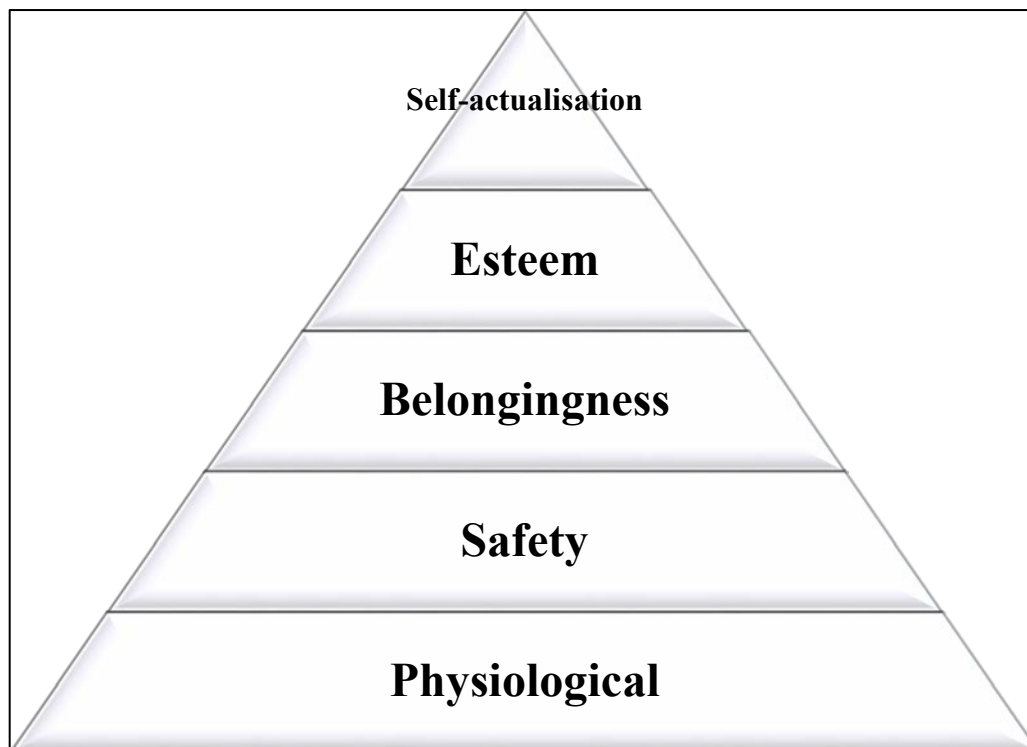
Figure 2-1_Maslow_Hierachy of needs pyramid (Maslow's hierarchy of needs, 2016)

Maslow posited that a person will not move to a higher-level need until the previous need has been satisfied; however, he also believed that the only reason people will not move towards self-actualization is because of societal hindrances (for instance in education) (Medcalf *et al.*, 2013:1326). In contrast to psychoanalysis, Goldstein showed that homeostasis will only become a human goal in a state of sickness (Buhler, 1971:381). Also, opposed to the psychoanalytic view is the belief that feelings of guilt mainly occur when an individual fails to live up to his "own best potentials"; thus, if self-actualisation does not occur (*Ibid.*). In conclusion, one may say that humanistic psychology views humans as healthy and motivated from within if the physiological and other more basic needs are fulfilled. This view thus already provides a more comprehensive account for human motivation.

- The achievement motivation theory distinguishes between two goals: mastery goals and performance goals (Ames, 1992:261; Elliot & McGregor, 2001). The mastery goal has a special focus on the "intrinsic value of learning", and involves skill acquisition, individuals seeking to understand what they are learning, improving competence, and individuals who are typically predominantly concerned with achieving according to "self-referenced standards" (Ames, 1992:262). It is also associated with "self-regulated learning" (*Ibid.*). It may yield a sense of belonging, in the sense that one is an active participant in a learning process with which one has identified (*Ibid.*:163). The performance goal is concerned with one's ability and sense of self-worth, which will typically be determined by "doing better than others",

"surpassing normative-based standards", and "achieving success with little effort" (*Ibid.*:262). "Short-term learning strategies" may be used, and in the instance of failing to achieve satisfactorily, negative feelings about oneself may arise (*Ibid.*:263). Later, this theory extended to performance-avoidance and mastery avoidance goals, as discussed by Elliot and McGregor (2001). The focus is on incompetence, and thus avoidance of negative outcomes associated with incompetence (*Ibid.*:502). It can be concluded that the mastery goal comes from within the individual, where the performance goal is based upon external factors. Therefore, the achievement theory distinguishes between two main reasons for motivation.

- The role modelling motivation theory draws from expectancy-value theory – expectancy refers to an individual's expectation of succeeding (or not), and the amount of effort he/she will accordingly extend in a task (Morgenroth *et al.*, 2015:5). Value refers to the resulting positive outcomes (such as "enjoyment") associated with succeeding in a task (*Ibid.*). An important aspect of "goal related expectations" is "self-efficacy", of which social modelling is a source (*Ibid.*:7). Observing someone successfully achieving an outcome gives the observer more confidence to do the same (*Ibid.*). Three themes of role models are thus derived: they are behavioural models ("showing us how to perform a skill"), representations of the possible (proving that a goal is possible to attain), and inspirations (making a goal "desirable" to achieve) (*Ibid.*:3). One can say that the role modelling motivation theory focuses on the social nature of motivation. It thereby shows the importance of the social environment on human motivation, as humans operate within a community.

- Herzberg (2003) constructed a theory on motivating employees: the motivation-hygiene theory. He distinguishes between dissatisfaction-avoidance or hygiene factors that are extrinsic to the work environment (salary, interpersonal relationships, company policy, etc.), and growth or motivator factors that are intrinsic to the work (achievement, recognition, etc.) (Herzberg, 2003:91, 92). According to Herzberg (*Ibid.*:91), the hygiene (dissatisfaction avoidance) factors will not ensure job satisfaction if they are in place, but if not, they will lead to job dissatisfaction. It is described as representing two different human needs: firstly, the animal-like need to avoid pain from the environment (i.e. the need for shelter), which then becomes the drive to earn money; secondly, the need to achieve and experience psychological growth (*Ibid.*). In a work setup, the job content will (or will not) provide opportunity to satisfy the growth need, and the pain avoiding behaviour will be triggered by the job environment (Herzberg, 2003:91). Herzberg (*Ibid.*:88) also stresses that external attempts at motivating employees will only lead to movement, and not to motivation, which he views as wanting to do something without the need for external influences. Herzberg's theory can also be generalised for use in other domains. One can summarise it as follows: human's basic

biological needs must be satisfied, but human's also have a need for psychological growth (also resonating with humanism's self-actualisation). Motivation can and should ideally emanate from the self to really satisfy this need.

- Theories of personality development also acknowledge the role of human motivation. In Erikson's psycho-social stages of development, expression of autonomy (in two-year-olds) is the second stage of the healthy person's development. Autonomy in this theory entails independence, and typically manifests in toddlers insisting to do things by themselves, and rejecting help (Newman, B.M. & Newman, P.R., 1987:219, 220). As their independent accomplishments yield positive results, the sense of autonomy grows and leads to a self-image of competence, so that by the end of toddlerhood, they will have a well-established "self-confidence" (*Ibid.*:219, 220). McAdams (2015:260) states three lines of personality development: a person is a social actor, then becomes a motivated agent, and finally also an autobiographical author. The motivated agent happens through age five to seven, and the child will develop personal goals and values, and is thus no longer only concerned with the present, but also with the future (*Ibid.*). This theory is derived from the human aspects that are causes of living in groups, and how personality develops accordingly (*Ibid.*:253, 254). Both theories imply a tendency of humans to develop and strive towards goals set by themselves, but within a social environment.

- Hull was concerned with integration (Berlyne, 1975:76). In his theory, he aimed to include "all human behaviour from child development to thought processes, from social interaction to psychopathology. He claimed that all acquired behaviours "derive from satisfaction of physiological needs", but also that intrinsically motivated behaviours are a function of basic psychological needs (Deci & Ryan, 2000:233).

In summary, many of these theories relate to the SDT, and all of them relate at least to a certain extent. Behaviourism's focus on reinforcements can be related to SDT's external regulation, where humans are controlled by external forces. Psychoanalysis' guilt induced by significant others can relate to SDT's introjection, where people are controlled by their own guilt due to internalisation of what was initially external regulation. In humanism, Maslow's hierarchy of needs acknowledges that humans strive towards their highest potentials – SDT holds that people are innately vital and seeking out challenges. The third need in his hierarchy, love and belongingness, is in accord with SDT's basic psychological need for relatedness. The fourth need for esteem can be related to SDT's basic psychological need for competence. Another concurrence is that similar to SDT, Maslow acknowledged that fulfilment of basic human needs is essential for physical and psychological health.

In the achievement motivation theory, the mastery goal, with its focus on the intrinsic value of learning, gaining competence, and achieving according to self-referenced standards relates to the following within SDT: intrinsic motivation, the basic psychological needs for competence and autonomy (the individual is not controlled by external forces). The performance goal, which deals with attaining a sense of self-worth, surpassing others, and achieving according to normative-based standards, relates to SDT's introjected regulation (the individual is controlled from within by pride and desired feelings of self-worth). It represents poorly internalised extrinsic motivation. The role-modelling theory relates to SDT's basic psychological need for relatedness in the sense that an activity may be desirable if valued by a significant other or someone to whom an individual may want to feel related. It also relates to the need for competence, as an individual must expect that they may succeed in an activity by observing someone else successfully doing it.

In Herzberg's employee motivation theory, he recognises that besides physiological needs, humans have the need for psychological growth and development. This in accord with SDT's starting point; humans have an innate tendency towards vitality and growth. Herzberg's hygiene (dissatisfaction avoidance) factors will not lead to job satisfaction, but if absent, will lead to job dissatisfaction. This relates to SDT's nutriments for optimal psychological growth, namely the basic psychological needs. Herzberg refers to factors such as co-worker relationships (SDT's relatedness), and company policy (which may be non-supportive of autonomy). The growth or motivator factors also relate to SDT's psychological needs, as it includes achievement and recognition (competence). Herzberg views external attempts at motivation (in SDT external regulation) as not truly being motivation, but rather movement. True motivation in his view is the desire from within to do something. In SDT, the latter will refer to well internalised extrinsic motivation or ideally intrinsic motivation. The external attempts will fall under external regulation in SDT – extrinsic motivation which is controlled by external forces and does not come from within the individual.

In Erikson's stages of personality development, autonomy is viewed as a stage of healthy development, and entails independence (contrary to SDT), but is otherwise in accord with SDT's view of autonomy. Erikson also acknowledges goal setting and challenge seeking as a stage in a healthily developing child; similar to SDT's view of the vital, challenge seeking and growth oriented healthy human. McAdams's theory of personality development states three stages: social actor, motivated agent, and autobiographical author. In this view, the social aspect relates to SDT's relatedness need. Goals and challenges are also acknowledged, and acquisition of values (SDT's internalisation of values within a society). Hull believed that intrinsically motivated behaviours are a function of basic psychological needs. Similarly, SDT posits that intrinsic motivation is maintained through satisfaction of the basic psychological needs for competence, autonomy, and to a lesser extent relatedness.

Instead of denying the relevance of all previous motivational theories, one could say that SDT brings it together under one macro-theory which follows a holistic approach towards human motivation and personality development. The SDT will be discussed in its broadest sense in the next section.

2.1.2 Overview of macro-theory

The Self-Determination Theory (SDT) is a comprehensive theory for studying motivation. It "represents a broad conceptual framework for the study of human motivation and personality development" (Costa *et al*., 2014:11). This theory belongs to the positive psychology branch. Positive psychology asks what the "nature" of the "effectively functioning person" is, "who successfully applies evolved adaptations and learned skills" (Sheldon & King, 2001:216). It especially focuses on growth promoting factors in humans (Vansteekiste & Ryan, 2013:263). A more "open and appreciative perspective" is adopted towards the nature of "human potentials, motives and capacities" (Sheldon & King, 2001:216). SDT similarly seeks to illuminate psychological processes that will "promote optimal functioning and health" (Deci & Ryan, 2000:262), as humans are shown to orient towards "vitality, integration, and health" (*Ibid.*:229). Viewing humans as inherently possessing the capacity to be motivated, the SDT can be viewed as a pioneer in motivation studies in various contexts.

Furthermore, SDT deals not only with the amount of motivation a person has, but with the quality of that motivation. Ryan and Deci (2000a:69) state that there are varying factors by which people are "moved to act" – people can for instance be motivated by valuing an activity or by external pressures. The latter may include fear of punishment for not doing one's homework in the case of a school learner. According to Evans (2015:66), people will adopt an identity that is consistent with their "sense of self". The quality of someone's motivation to carry out a certain behaviour will thus be determined by the extent to which that behaviour can be integrated into a person's "sense of self" (*Ibid.*).

The SDT is also described as a dialectical view: the natural "integrative tendencies" of humans are accepted; yet, the powerful influence of "social contexts" on these processes is acknowledged (Ryan, 1995:403). This brings us to the organismic-dialectical meta-theory. Due to their "psychological make-up", people are inclined towards "autonomy (internal integration)" and "homonomy (social integration)", while at the same time these inherent tendencies require to be fostered by the social environment to function optimally (Deci & Ryan, 2000:262). The meta-theory can be summarised as consisting of three main elements:

1. Humans are inherently oriented towards growth, integration, and development (Deci & Vansteekiste, 2004:24).

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2. Humans are innately proactive, and can thus manage the inner emotional and outer environmental "forces" they are confronted with, instead of being "passively controlled by it" (Deci & Vansteekiste, 2004:23).

3. To "actualise" these potentials, environmental "nutriments" are needed – if these are denied by "chaotic, controlling, or rejecting" environments, there will be negative outcomes for development and growth (*Ibid.*:24), such as apathy, alienation, and irresponsibility (Deci & Ryan, 2000a:68).

Following the organismic-dialectical view, the next important topic to discuss will be the nutriments from the social environment – what they are and how they function. In the following section, these nutriments, namely the basic psychological needs will be explored.

2.1.3 Basic psychological needs in SDT

The basic psychological needs are the nutriments required by the social environment and their satisfaction will ensure optimal human functioning. Deci and Ryan (2000:229) define it as follows: in SDT, "needs specify innate psychological nutriments that are essential for ongoing psychological growth, integrity, and well-being". They are the needs for competence, relatedness and autonomy. All three needs are equally important for psychological health, and thus not only one or two should be satisfied (*Ibid.*). SDT distinguishes between need satisfaction, need dissatisfaction/deprivation, and need thwarting/frustration (Vansteekiste & Ryan, 2013:264, 265). Need frustration may reliably predict a form of "maladaptive functioning" or "pathology" (Deci & Ryan, 2011:19). Need deprivation may yield less far-reaching consequences than need thwarting (Vansteekiste & Ryan, 2013:264, 265). Furthermore, the needs are viewed as universal – regardless of culture, ethnicity, gender, age, and socioeconomic status, these needs must be fulfilled (*Ibid.*). A brief description of each need will follow.

2.1.3.1 Competence

The need for competence refers to feeling effective in what one is doing, and is thus also coined by Deci and Ryan (2000:231) as "effectance". People have the desire to be effective in their "skills, abilities and interactions in the social environment" (Evans, 2015:68). Seeking "optimal challenge" is also a manifestation of the competence need (Deci & Ryan, 2000:252).

Competence support enhances intrinsic motivation. According to Deci and Ryan (2000:234), competence support can manifest itself in positive feedback, which enhances intrinsic motivation, while negative feedback decreases it. Competence support also plays a role in the process of

internalisation. A person must feel competent in the endeavour that is internalised (Deci & Ryan, 2000:238). The need for competence can generally be supported by acknowledging improvement in a task, believing someone can achieve their goals and success, and providing positive feedback (Rocchi *et al.*, 2016:2). Thwarting of competence may include discouraging someone from a difficult task, not believing in their ability to improve, and emphasising their shortcomings (*Ibid.*).

2.1.3.2 Relatedness

Relatedness refers to the need to feel connected to other people – "to love and care and to be loved and cared for" (Deci & Ryan, 2000:231), or "to engage in meaningful relationships" (Kupers *et al.*, 2015:334). Deci and Ryan (2000:252) have also used the clauses "to seek attachments" and "experience feelings of security". According to Csikszentmihalyi (2017), people with one or more close friendships appear happier, and sharing one's feelings with these significant others contributes towards relieving of stress and depression. Relatedness also plays a role in intrinsic motivation. Infants are found to be more explorative when having a secure attachment to a parent (Deci & Ryan, 2000:235). Deci and Ryan (*Ibid*) theorise that that sense of securIbidity creates a backdrop, and intrinsically motivated behaviours are thus more likely to be expressed. Relatedness is important in internalisation. People will for instance internalise values and norms of their social groups, to whom they have feelings of relatedness (*Ibid.*:238). It may be supported by being warm towards someone, taking interest in their activities, showing a genuine liking for them, and providing support and care (Rocchi *et al.*, 2016:2). Thwarting includes being distant, not listening to someone, not being available, and excluding them from "activities or opportunities" (*Ibid.*).

2.1.3.3 Autonomy

Autonomy entails a sense of "volition" and "integrated self-regulation" (Ryan & Deci, 2000b:330). Autonomous behaviour manifests itself in "feelings of choice, interest, deep personal relevance, and internal causality" (Legault & Inzlicht, 2013:123). It is also coined as "self-initiating" behaviour (Kupers *et al*., 2015:334). Although competence is important to intrinsic motivation, following the example of positive feedback, it will only enhance intrinsic motivation effectively when the person receiving it feels responsible for the performance that was praised, or when the feedback is provided in a way that does not make the person feel less autonomous (Deci & Ryan, 2000:235). Autonomy support includes providing a rationale for a task, providing choice, and acknowledging someone's perspective (Rocchi *et al.*, 2016:2). Thwarting includes using intimidating language with someone, making demands, and giving rewards (*Ibid.*).

Autonomy plays a crucial role in the full internalisation of norms, values, behaviours, or activities. Although competence and relatedness are important to internalisation, integrated regulation (the most self-determined form) can only be achieved if autonomy is also supported (Deci & Ryan, 2000:238). The person must thus be able to freely "process" and accept a norm or value as their own (*Ibid.*).

Within SDT, autonomy does not equate "independence, individualism, detachment, or selfishness" (Ryan & Deci, 2000b:330). The opposite of autonomy is "heteronomy", which refers to "regulation from outside the self", by "alien" or "external forces" (Ryan *et al.*, 2008:157). It does not necessarily imply acting without "constraints" or "demands" – the same action could be carried out autonomously or controlled (*Ibid.*). When external forces "support" one's "initiative", it does not undermine autonomy (Ryan & Deci, 2000b:330). A learner could do their homework because of fear of detention (externally controlled) or because they see the importance of doing the homework task for their learning (autonomous). Conversely, defying a command does not necessarily imply autonomy (*Ibid.*). If the child does not do homework and tries not do get caught because they do not care about school and learning, the behaviour would also be seen as heteronomous. Honest defiance out of moral objection would be seen as autonomous behaviour (*Ibid.*). It becomes clear why autonomy can be interpreted wrong and create confusion and even contradiction. It is therefore important in this study to view autonomy within a SDT framework, and not by means of previous encounters with the term.

2.1.3.4 Interrelation between needs

It is important to take note of the "complex" and "interrelated" nature of the psychological needs (Evans, 2015:71). Satisfaction of one may lead to satisfaction of another. Feelings of relatedness may also lead to feelings of competence, as "acceptance" from close others plays an important part in feeling "competent" and "validated" (Uysal *et al.*, 2010:189). Deci *et al.* (2008:154) provide the example of willingly giving to others: the person will experience autonomy as it was his own decision, and at the same time connectedness to those he is giving to, and the ability to help through giving may create a sense of competence. "[A]utonomy also facilitates relatedness", as a relationship which is volitional and intrinsically motivated will likely involve trust and satisfaction (Ryan, 1995:419-420). Also, when people experience satisfaction of the three needs, they may internalise behaviours more fully, but reciprocally, a person who has internalised behaviours and values well, may consequently experience greater satisfaction of the three needs (Vansteekiste & Ryan, 2013:267).

Although the needs should operate complementarily, the social world often causes needs to be in opposition with one another (Ryan & Deci, 2000b:327) – giving up autonomy or competence to gain

relatedness, or conversely relatedness or autonomy to gain competence. An example could be an adolescent who confines themselves to the norms and values of their peers (giving up autonomy) to be accepted and feel related to them. The adolescent may also cease to achieve according to their potential in their schoolwork (competence) to avoid being rejected (relatedness) by peers. In a different instance a music prodigy may give up being in relationships with others (relatedness) to spend more time improving their skill (competence). They may also give up their need to make choices (autonomy), to gain more competence by confining to their master's decision that they should enter a music competition. Deci and Ryan (2000a:75) state that conflicts between the needs may lead to alienation and psychopathology. It is thus important that all three psychological needs should be equally supported to promote psychological health. This leads to the existence of different mini-theories within SDT, where all three psychological needs are interrelatedly at work.

2.1.4 Mini-theories

There are six mini-theories within SDT. Each one addresses different aspects of motivation and personality (SDT, 2016). A brief overview of each one, and a more elaborate description of those that will be used in this study will be provided in this section.

2.1.4.1 Overview of mini-theories

- Cognitive Evaluation Theory (CET) – deals with intrinsic motivation and contexts that can enhance or undermine it (Ryan, 2009);
- Organismic Integration Theory (OIT) – deals with the variants of extrinsic motivation according to the extent to which it has been internalised (Ryan, 2009);
- Basic Psychological Needs Theory (BPNT) – satisfaction of the three basic psychological needs – competence, relatedness and autonomy – will predict physical and psychological well-being, and prevent mal-adaptive functioning (Deci & Vansteekiste, 2004:34);
- Relationships Motivation Theory (RMT) – close relationships are not only desirable, but can be essential for well-being and adjustment, as the need for relatedness is satisfied. However, in quality relationships, autonomy and to a lesser extent competence, is also satisfied (SDT, 2016);
- Causality Orientations Theory (COT) – people orient to different aspects of the environment to regulate their behaviour (Ryan, 2009):
    - Autonomous orientation (i.e. one's interest in the work) (Legault & Inzlicht, 2013:126);
    - Controlled orientation (opportunities for advancements in this work) (*Ibid.*);

> ➢ Impersonal orientation (no motivation; hoping the work will not be too much) (*Ibid.*).

- Goal Contents Theory (GCT) – distinguishes between intrinsic and extrinsic goals and their impact on well-being (SDT, 2016). Intrinsic goals (relationships, personal growth, community contribution) are associated with greater well-being and extrinsic goals (attaining wealth, fame, image) are associated with external pressures, and thus theorised to lead to diminished well-being (Deci & Ryan, 2000:244).

A brief overview of all six mini-theories have been given to understand the SDT in all its facets. A more thorough account of the mini-theories that will be applied to the current research will follow: Cognitive Evaluation Theory (CET), Organismic Integration Theory (OIT) and Basic Psychological Needs Theory (BPNT).

2.1.4.2 Cognitive Evaluation Theory (CET)

This mini-theory deals with intrinsic motivation, and conditions under which it will flourish or diminish. Intrinsic motivation is the most self-determined type of motivation. In its most basic definition, it entails interest in an activity (Deci & Ryan, 2000:230). It is signified by "curious exploration" of one's environment, and offers proof that humans innately seek out "challenges" to expand their knowledge and skills (Ryan, 1995:404). Pressure and tension is theorised to decrease intrinsic motivation (SDT, 2016). Intrinsic motivation thus forms the "basis for people's learning and development" (Deci & Vansteekiste, 2004:26); therefore, it is important to understand how to enhance it, and what conditions may undermine it.

Two of the three psychological needs are deemed essential for intrinsic motivation to occur: competence and autonomy. Competence can be facilitated by optimal challenges, freedom from evaluations (Ryan & Deci, 2000a:70), and providing positive feedback, while negative feedback may thwart the need for competence (Deci & Vansteekiste, 2004:27). According to Deci and Ryan (2000:234), competence support will only effectively facilitate intrinsic motivation if it is accompanied with a support for "self-initiation", which translates into autonomy. External pressures such as rewards and deadlines undermine the need for autonomy, and thus can have a negative impact on intrinsic motivation (Deci & Ryan, 2000:234). Autonomy can be supported by offering choice and acknowledging feelings, as that can create a sense of self-initiation (Deci & Ryan, 2000:234). Although less central, relatedness also plays a role in intrinsic motivation; especially for young mammals (in this case humans) – intrinsic motivation may "flourish" more against the backdrop of "secure attachments" to "caregivers" (Ryan, 1995:404).

2.1.4.3 Organismic Integration Theory (OIT)

This mini-theory deals with different degrees of extrinsic motivation. Unfortunately, not all behaviours can be intrinsically motivated. This will especially occur after early childhood when children are pressured to do activities that they do not necessarily find interesting, and to accept new responsibilities (Ryan & Deci, 2000a:71). Therefore, OIT deals with the way in which an individual can accept full responsibility for behaviours that are not intrinsically motivated, through the process of *internalisation* and *integration* (Vansteekiste & Ryan, 2013:266). Internalisation within SDT is the process through which an individual moves away from an "external perceived locus of causality" to an "internal perceived locus of causality" (Ryan, 1995:405). Also important to note is the influence of social contexts on these processes (*Ibid.*).

Extrinsic motivation is not a unitary concept. In Figure 2-2, amotivation and intrinsic motivation are at the opposite far ends of the spectrum. Because neither includes internalisation of motivation, they do not fall on the continuum (Ryan, 1995:407), but are shown outside of the continuum to illustrate the extent to which the four forms of extrinsic motivation are gradually more internalised until it becomes completely self-determined (integrated regulation). Amotivation occurs when a person lacks the intention to behave; it is thus a complete lack of motivation, and therefore stands in contrast to intrinsic and extrinsic motivation (Deci & Ryan, 2000:237). People either "do not act at all" or they "act without intent", which can be described as "just going through the motions" (Ryan and Deci, 2000a:72). It results from not valuing an activity, not feeling competent to do it (*Ibid.*), or not connecting actions to desired outcomes (such as helplessness) (Ryan, 1995:407). OIT only deals with the four forms of extrinsic motivation which falls along the continuum. It is represented visually as follows:
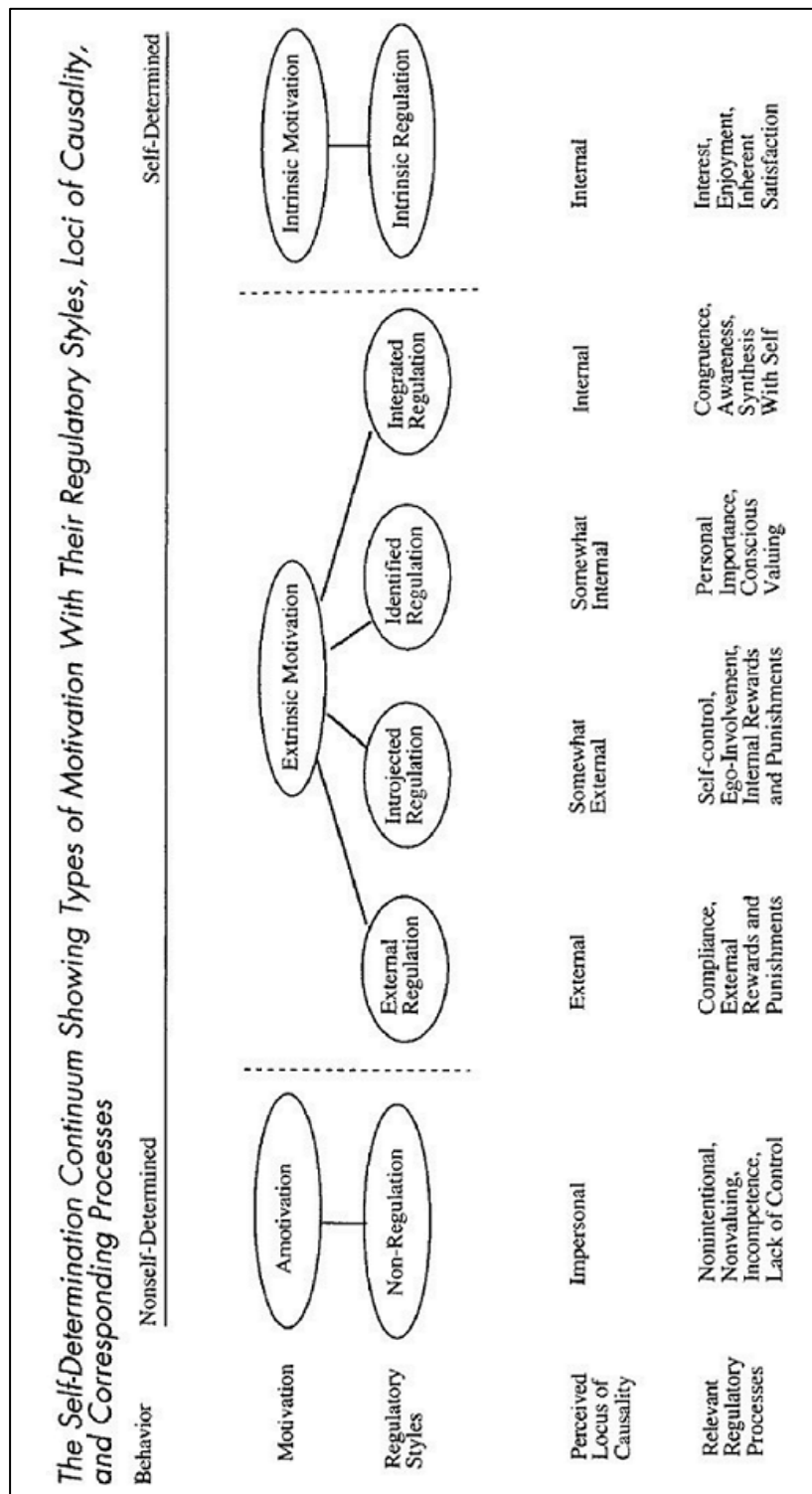
Figure 2-2_Self-Determination Continuum (Ryan & Deci, 2000a:72)

As shown in Figure 2-2, OIT deals with different levels of extrinsic motivation, categorised according to the extent that it is internalised and therefore self-determined (Ryan & Deci, 2000a:71). The four levels of extrinsic motivation are external regulation (least autonomous), introjected regulation, identified regulation, and integrated regulation (most autonomous).

External regulation is the most controlled form of extrinsic motivation in which internalisation has not taken place (Deci & Ryan, 2000:236). It is dependent on the administering of external forces such as rewards, threats, or punishments (Evans, 2015:75). The only possible responses from an externally regulated person are "compliance" or "defiance" (*Ibid.*) – either giving in to the control or rebelling against it. It is clear why external regulation will not yield long-term success, as the individual does not regulate their behaviour autonomously.

Introjected regulation is less externally controlled, but the behaviour has not been integrated with the person's sense of self. Deci and Ryan (2000:236) describe it as regulations being within the person, but still "relatively external to the self". It can be understood as the same controlled processes as external regulation, except that the controller is the person himself. In Ryan and Brown's (2003:72) words, "one part of the personality pushing other parts around". The sense of self-worth or pride are the self-imposed rewards, and the shame and guilt the punishments (*Ibid.*). This type of motivation can be caused by someone having internalised the "contingent regard of a significant other" (*Ibid.*). The significant other may be a parent who gives love and praise when a child is living up to their expectations, but who is disapproving and unloving when a child does not comply with their expectations. According to Deci and Ryan (2000:236), the behaviours resulting from introjection are not self-determined, because it has not been "assimilated" to the self.

Identified regulation is a more autonomous, self-determined type of extrinsic motivation (Ryan & Deci, 2000a:72). It is the first stage on the continuum in which a behaviour is part of a person's self (Evans, 2015:75). He has identified with the value of the behaviour and is therefore "self-initiating" in carrying it out (*Ibid.*). A behaviour is however not primarily associated with enjoyment or personal interest (Vansteekiste & Ryan, 2013:267), but is "instrumental" to a desired outcome and therefore still extrinsic (Deci & Ryan, 2000:236). An example would be a musician practising scales because he knows that it will contribute towards better technique and playing of an instrument. One can see that identified regulation is an important type of motivation, as people will autonomously carry out behaviours that are not in itself enjoyable, but necessary to yield certain outcomes. It can therefore contribute to people's success in different domains.

Integrated regulation is the most autonomous type of extrinsic motivation (Ryan & Deci, 2000a:73). Behaviours are not only seen as instrumental and valuable in accord with other outcomes, but "assimilated" with other aspects of the self (Evans, 2015:75). It therefore shares qualities with intrinsic motivation (Ryan & Deci, 2000a:73). The behaviours that are integrated in the person's sense of self will be associated with the person's life goals (Evans, 2015:75). An example is a science

student (who is on the level of integrated regulation) who does not only spend time on laboratory experiments because it will contribute to acquiring his degree, but because it is an integral part of his life goal of being a scientist.

One does not have to progress through all stages of internalisation to achieve integrated regulation – any one of the regulations can be achieved at a given point in time, depending on "prior experience" and current environmental factors (Ryan & Deci, 2000a:73). As the basic psychological needs are the mediating factors in all the mini-theories, both previous and current experiences will include support for the psychological needs. People will internalise behaviours more fully and be more autonomous in them if they have support for all three basic psychological needs (Vansteekiste & Ryan, 2013:267). Firstly, an extrinsically motivated behaviour will initially be carried out because it is "prompted, modelled, or valued" by significant others (Ryan & Deci, 2000a:73), or because people will likely internalise values and norms of their social groups (Deci & Ryan, 2000:238); therefore, the need for relatedness is important for the internalisation process. Competence is also important for the process, as people will internalise an activity more easily if they feel efficacious in carrying it out (Ryan & Deci, 2000a:73), which also includes understanding the rationale behind it, and being able to enact it (Deci & Ryan, 2000:238). Without also feeling autonomous, however, a person can be predicted to only remain introjected, or have "poorly integrated" identified regulation, but will not achieve integrated regulation (Ryan & Deci, 2000a:73). A person must be able to freely process and endorse transmitted values (Deci & Ryan, 2000:238). Autonomy support is inhibited by external pressures, control, and evaluations (Deci & Ryan, 2000:238; Ryan & Deci, 2000a:73).

The type of extrinsic motivation a person has, is nevertheless not always easily distinguishable from others. In a previous study, children with introjected regulation and identified regulation both reported that they "try hard in school" and were motivated for school work according to their parents (Deci & Ryan, 2000:239, 240). The difference was that the introjected children showed anxiety in school and "maladaptive coping" with failures, while identification proved to lead to enjoyment of school and "pro-active coping" with failure (*Ibid.*:240). The finding showed that relatively controlled and autonomous learners can look equally motivated, but autonomy is more positively associated with well-being (*Ibid.*). It is thus important for parents and teachers to attend to all three of the needs, and not just one or two.

2.1.4.4 Basic Psychological Needs Theory (BPNT)

SDT maintains that the psychological needs are universal, and that everyone therefore should have competence, relatedness and autonomy fulfilled to function optimally (Deci & Ryan, 2011:19). Satisfaction of the needs should predict long-term well-being and prevention from ill-being, which

includes "better general health and self-esteem, and less anxiety and psychosomatic symptoms" (Deci & Vansteekiste, 2004:34). The BPNT therefore directly connects the needs to well-being (Ryan, 2009). Each need has an independent effect on well-being, and any impact of an event on wellness is related to need satisfaction in that situation (*Ibid.*).

From the discussion of SDT as a theory, it becomes clear that many life situations include at least a certain aspect of the theory or one or more of the mini-theories. CET is applicable to spontaneous exploratory human behaviour since early years in childhood and onwards. OIT offers a wide scope to understand motivation for less interesting activities, which are obligatory and unavoidable. BPNT extends to general well-being, and not just within specific activities or tasks – a person's need satisfaction on a daily level in all different situations. It is therefore understandable that SDT has been applied to various domains.

2.1.5 Applications of SDT

SDT is a holistic psychological theory (Ryan, 2009), which makes it applicable to many domains and situations. Deci and Ryan (2011:18) list many domains: improving school systems, making health care organisations more effective, making workplaces more "nourishing" for the employees, making sport organisations more satisfying for players/athletes, homes more "growth promoting", and psychotherapy more effective in healing the psyche and facilitating psychological health. For the purposes of this study, the applications of SDT in education will be discussed.

Viewing humans as innately proactive and integrative should have a vast impact on the way that education is approached. As Ryan (1995:402) stated, the belief that humans "differentiate and integrate experience and knowledge" has led to "progressive educational approaches" in which educators should act as "facilitators" instead of "directors" of learning. It is thus clear that SDT can provide a theoretical background around which educational philosophies can be developed. The basic psychological needs underlie all the mini-theories and would thus be important to consider in educational settings.

Autonomy support is an important and challenging consideration in education. It can be categorised as follows:

- Support students' inner motivational resources: autonomy supportive teachers should encourage student initiative by planning instruction according to students' interests, preferences, goals, and by providing challenges, and fostering their curiosity (Jang *et al*., 2010:589). The focus is not on external forces such as punishments and deadlines (*Ibid.*).

- Use non-controlling informational language: teachers should provide clear rationales for tasks and give informative messages focusing on competence, rather than neglecting rationales and using controlling, evaluative and pressuring language (*Ibid.*).
- Acknowledge students' feelings and perspectives: teachers should communicate that they value students' perspectives and feelings, inquire about it, and accept negative feelings as valid resistance against demands, structures and activities that students find less interesting (*Ibid.*).

This section provided an overview of SDT, with a more detailed discussion of the mini-theories chosen for the purposes of this study. How the predecessors of SDT relate to it, was also shown. The discussion of the applicable mini-theories, together with the applications in education, were used (amongst other sections to follow) to set up the coding framework (Appendix 2) for analysis of data.

2.2 Musical understanding

In the following section, musical understanding is largely discussed according to how it is presented by David. J Elliott. In *Music Matters: A New Philosophy of Music Education* (1995), Elliott refers to musicianship, which is substituted for musical understanding in the second edition *Music Matters: A New Philosophy of Music Education* (2015) of the book, with co-author Marisa Silverman. Musical understanding is a more comprehensive term, referring to musicianship and listenership. Elliott's philosophy of music is coined the praxial philosophy, and although he is not the first advocate of the latter, according to McCarthy and Goble (2005:38), his book "*Music Matters: A New Philosophy of Music Education* (1995) […] represents […] the most fully developed and publicly visible articulation of a praxial philosophy of music education". According to Elliott (1995; 2015:465), music teachers' task is not only in and for the present, but should also be concerned with enabling students to continue their musicianship in the future. In *Music Matters,* David Elliott (1995:134) holds that music teachers should develop learners' musicianship – "the key to lifelong musical enjoyment". From this philosophy, music education has a long-term goal, and musical enjoyment has a central place.

2.2.1 Praxial philosophy

The word *praxial* is derived from the Greek word *praxis* (Elliott, 2005:14). Besides suggesting certain action, praxis is concerned with context – thus action within a specific context (*Ibid.*). According to Regelski (2009:69), any praxis is originated to serve "socially relevant values and needs". The value of a praxis can be determined by "its useful role in society", its particular use, and any noticeable

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difference that it makes in the lives of a society and its members (Regelski, 2009:69). The praxial philosophy can thus be applied to various domains of life.

In the current study, the praxial philosophy's application in music will be examined, as mainly held by Elliott and Regelski. Elliott (2005:7) holds that "many important life values" can account for the "significance of music in human life". These life values according to Elliott (1995:121; Elliott & Silverman, 2015:380) are "self-growth, self-knowledge, and optimal experience". Elliott's praxial philosophy of music education consists of four dimensions: "musical doers", "musical doing", "something done", and the "context" (Davis, Elliott & Silverman, 2013:4). Praxis in music is summarised as follows: "critically reflective and informed actions that are" rooted in, and "creatively responsive to" "traditional" and changing "musical/cultural/social values", and "applied ethically" for the "improvement" of students' lives (Elliott & Silverman, 2015:17). According to Regelski (2005:222), it is the "use-value" of music that attracts young people to it. Elliott (1995:121; Elliott & Silverman, 2015:379), however, also states that "music making" ("performing, improvising, composing, arranging, conducting") is "inherently valuable". Regelski (2005:229) critiques Elliott's praxial philosophy for emphasising existing types of music more than the social nature of music, and that music evolves according to its specific functions.

Elliott's (2005:14) praxial philosophy of music suggests that music involves "human doing and making", and that music should be understood in terms of the "meanings and values" which can be seen in real music making, listening, and in different cultures. According to Fung (2003:71), an investigation of "clashes" between values of different musical cultures (and their "contrasting styles") may lead to "expanded imagination and creativity and a new understanding of music's full capacity". Szego (2005:202) expands Elliott's multicultural notion, by suggesting that putting performance at the "center" of "multicultural music education" may pose problems – the meanings that some cultures attach to music may sometimes justify not performing in that specific context. In line with Elliott, Woodward (2005:257, 258) states that in the early music education of children, they should have the right to practise their own musical cultures, as this is part of their identity. Reconciliation with other cultures should also be present in this early music education (*Ibid.*:256). However, as it is not practically achievable to be fully proficient in the practice of all music cultures, music education programs sometimes have to decide between "depth" and "breadth" (Fung, 2003:71). Fung (*Ibid.*) therefore suggests studying only a few "contrasting musical traditions" in-depth.

2.2.1.1 Values of music

In accord with the praxial philosophy, Regelski (2002:50) states that "human purposes" determine the value of something. Elliott and Silverman (2015:14) believe that a philosophy's "value" is determined

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by the "practical differences" it makes in people's lives. According to Elliott and Silverman (2015:15), the "nature and values of music" and music education in all its manifestations depend on the "nature of human personhood", as these are "human endeavours". Furthermore, sound (an objective concept) "becomes music" due to "qualities" that humans assign to it, according to the human purpose that it serves (Regelski, 2002:50). This connects to Elliott's (2005:9l) belief in the importance of the social contexts of musical works, and how they can contribute to a culture and its members' sense of identity. Bowman (2002:57) similarly believes that music is valued for many reasons; as many as there are "human uses to which musical experiences and practices can be put".

One of the most important categories of musical values according to Elliott (1995:120; 2005:9; Elliott & Silverman:379) involves musical enjoyment, self-growth, self-knowledge, and self-esteem. Complementary to these values, Silverman (2007:115) suggests placing students' "selfhood at the center of the teaching-learning process". They should be encouraged to reflect on who they are "individually, artistically and socially" (*Ibid.*). These values can be achieved when a person's level of musicianship (or listenership)/musical understanding matches the level of the musical challenge they want to master (Elliott, 1995:121; Elliott, 2005:9; Elliott & Silverman, 2015:412). Koopman (2005:83) critiques Elliott's account of musical values for the following reasons: it is not guaranteed that music will provide self-knowledge, for many successful artists have a lack of self-knowledge. He (*Ibid.*) also states that Elliott suggests that optimal experiences induce a loss of self-consciousness, which according to Koopman (*Ibid.*), contradicts the gain of self-knowledge. This may, however, be explained by Flow's premise that during such an experience, one's "concern for the self disappears, yet, paradoxically the sense of self emerges stronger after the Flow experience is over" (Csikszentmihalyi, 1990). Secondly, not all musical practices involve the same complex cognitive challenges that are a necessary condition for 'Flow' to occur (Koopman, 2005:83). Elliott (1995:121; Elliott & Silverman, 2015:379) does, however, acknowledge that not all musics are "dynamic practices", which "spiral upwards in complexity", and he states that the "traditions and standards" of a practice will determine the "artistic goals" in that practice. Thirdly, Koopman (2005:84) states that Elliott's argument for the unique cognitive processes involved in music making and listening, is not exclusively present in music making and listening, but also in other non-musical activities that involve "progressive challenges". According to Koopman (*Ibid.*), the value of music should be embedded in the "specific characteristics" of music itself. However, one can conclude that music should be valued for both its specific characteristics, and accordingly the music-specific challenges involved through its unique cognitive processes.

2.2.1.2 Why music education?

The values of music also apply to music education. According to Regelski's (2002:54), praxial account, musical values should be derived from musical "purposes and functions", and thus these functions should be central to why music education is worthwhile and important. Music making according to Elliott (1995:122; Elliott & Silverman, 2015:380) is a "unique" way of "gaining self-growth, self-knowledge, and optimal experience", and therefore is "worth learning to do well" by all learners. Elliott (2005:10) holds that the musical values of self-growth, self-knowledge, and musical enjoyment should be "at the center of every teaching-learning episode". If teachers successfully impart these values, music education will contribute to learners' self-esteem and self-identity development (*Ibid.*). Bowman (2002:57), in contrast, argues that not all reasons that people value music are reasons that "require" or "benefit from" music education.

Competency in music making may also serve as an expressive outlet. "Musicing and listening" provides a means through which to "extend" people's "expressive and impressive" abilities, by providing opportunities to express emotions and cultural meanings, and to represent phenomena in the world (Elliott, 2005:10). In the process, listeners' "conscious powers and musical understanding" are also challenged (*Ibid.*). According to Elliott and Silverman (2015:280), music making is worth doing "for the sake of the self, and others", with benefits including "human flourishing, communal well-being", and "an empathetic sense of self-and-other".

2.2.1.3 Who can benefit from music education?

All learners can and should benefit from music education. Musical understanding is "achievable, accessible, and applicable to all students" (Elliott & Silverman, 2015:461). According to Elliott and Silverman (2015:280), "learning to be a music maker and listener" is a doable and worthwhile educational goal of all learners. All humans are born with musical ability, which is unique to the human race (Woodward, 2005:249). Elliott (2005:11; Elliott & Silverman, 2015:445) similarly states that musicianship and listenership are not natural born talents that only some possess, but is a cognitive process for which everyone has the necessary brain mechanisms to do it competently, "if not proficiently" (Elliott & Silvermann, 2015:445). It remains debated whether there is a "musical brain center", but if not, it does not mean that musical ability is not innate, and it has been agreed upon that musical activity engages all areas of the brain (Elliott & Silverman, 2015:180, 181). Gardner's (1995:16) notion of multiple intelligences states that all people possess some amount of all the different intelligences, although they are unequal in strength. Music is one of the intelligences that everyone should possess an amount of. In line with this notion, all children have musical intelligence and can achieve musicianship – not just to the extent of listening, but also performing (Woodward,

2005:249). It has been found in a study that children who achieved a high level of musical success (to the extent of entering a career as musicians), had parents who engaged them in singing activities before the age of three (Davidson, Howe & Sloboda, 1995/1996:43). However, not everyone can become a musical genius, but making and listening to music well can be achieved by everyone (Elliott, 2005:11). Some may have high levels of musical intelligence, and a "high interest in learning to make and listen for music well", which may cause them to "develop musical understanding and musical creativity more deeply and broadly than others" (Elliott & Silverman, 2015:358). This can serve as a premise for why everyone should receive music education, as just like language acquisition, it is a natural human capacity.

2.2.1.4 What should be taught?

Elliott (1995:121; 2005:7; Elliott & Silverman, 2015:380) believes that all learners' musicianship and listenership/musical understanding should and can be developed. The means through which to achieve this is musical actions – "performing-and-listening, improvising-and-listening, composing-and-listening, arranging-and-listening, conducting-and-listening, and listening to recordings and live performances" (Elliott, 2005:7). Listening should be taught directly in line with the music that students are learning to make (Elliott, 2005:11). Through whichever means music is taught (for instance a choir), the class should be a "reflective practicum", emerging students in various "musical praxes" through the chosen medium (Elliott & Silverman, 2015:441). Moreover, each musical work that is undertaken (to perform, improvise, compose, arrange, or listen to) should be approached in all its dimensions: "interpretive, structural and expressional" (Elliott, 2005:13). Silverman (2007:114, 115) believes that performers and all music students should be educated "holistically" and "comprehensively", meaning that they need to learn interpretive awareness together with technical proficiency, and be able to reflect on interpretive freedom, as well as faithfulness to the score. Different music programs can and should however differ according to learners' levels of musicianship, the music chosen to be studied, and the media (string instruments, electronic instruments, voices, etc.) employed for music making (Elliott, 2005:12).

Elliott (2005:12) believes that musical creativity should also have a place in music teaching, as it extends musicianship. Similarly, according to Sherman (1971:59), a "properly balanced music curriculum" should include creativity for the benefits it has for the students. Students should be motivated to pursue music as a "living" and "totally practised" art (*Ibid.*:60). Priest (2002:47) also states that improvising, playing by ear, and composing are valuable experiences. Improvising and composing are natural forms of learning, and teachers may create more opportunities for these, and not focus only on notation (*Ibid.*:48). Martin (2005:174) states that the praxial view "enables" everyone to compose and improvise, and that teachers should therefore become proficient in these

activities to be able to teach it. Sherman (1971:60) states that a teacher's role is to create an environment where students can learn to compose by their own discovery processes. According to Riveire (2006:44), improvisation is a higher level cognitive activity which includes application, analysis, and synthesis. In her experience, it also increases student motivation, and exploring their instruments may also aid their independence in practising by doing more than what was covered in class (*Ibid.*:44, 45). It should, however, be approached in a playful way, as this will minimize possible anxiety (*Ibid.*:43). Similarly, the Orff approach states that improvisation and creation is a natural part of children's play (Shamrock, 1986:51). Martin (2005:168) disagrees with Elliott in incorporating composing "alongside performing and improvising only as time permits", as he feels that composing has unique features which will extend musicianship "beyond" what is "possible". It also includes a "wider range" of decision making such as instrumentation (*Ibid.*). At the same time, Martin (*Ibid.*) agrees with Elliott, because performing can provide a "foundation" for "students' composing". Supporting this statement, according to Elliott and Silverman (2015:347), musical understanding (musicianship and listenership) "promotes creativity". When engaging in the musical actions, music makers learn to "select" and "generate" "musical ideas" (*Ibid.*).

Elliott (2005:9, 10) also states the importance to incorporate music from different cultures in education, as it in turn activates self-examination and links musical values to "the broader goals of humanistic education". In Silverman's (2008:189) case study of a home school choir, about singing songs from different cultures, learners reported learning about who a culture is as a people, and understanding what the people felt, and who they were when they wrote or sang the songs. Elliott and Silverman (2015:450) coin this goal "self-understanding through other-understanding". Although teachers cannot teach all existing music cultures to their learners, it is possible to incorporate more than one or two cultures' music (Elliott & Silverman, 2015:446).

According to Berleant (2009:59), one of the first steps in music education should be to allow for musical experience without leading and directing it, and then one can assist in "developing skill in engaging in the experience". Dalcroze eurhythmics is one suggestion of Berleant (*Ibid.*) to encourage "participation in musical experience" by using body movement to create awareness of metre and rhythm. It can also be experienced how different metres are at play in different "musical forms", such as a waltz (*Ibid.*:60). Harmonic occurrences such as anticipation, suspension, resolution, and pedal point can also be translated into body movements.

 2.2.2 Thinking and knowing within musical understanding

In the first edition of *Music Matters* by Elliott (1995), five types of knowledge for musicianship were identified and discussed. In the second edition (2015), the types of knowledge (now referred to as

thinking and knowing) for musicianship and listenership (now collectively referred to as musical understanding) were expanded to eight different types. The original types of knowledge are presented and discussed in the following section, with the addition of the new ways of thinking and knowing.

2.2.2.1 Procedural musical thinking and knowing (as previously presented)

Procedural knowledge is viewed as an overarching knowledge which entails all the other types of knowledge discussed below. According to Elliott (1995:55), in the modern view, actions and thoughts are not dualistic in nature – thus a physical action always following from a verbal thought. He (1995:55; Elliott & Silverman, 2015:215) suggests that "actions are nonverbal forms of thinking and knowing". When someone is on a competent, proficient, or expert level of musicianship, their knowledge is demonstrated practically and not verbally (Elliott, 1995:56). The musical knowledge is displayed in a music maker's actions (Elliott, 1995:56; Elliott & Silverman, 2015:213). Furthermore, to understand and appreciate an expert musical performance, the listener requires some amount of procedural knowledge in the performance practice (Elliott, 1995:56, 57; Elliott & Silverman, 2015:213). This may serve as another rationale for music tuition; even though a learner may not pursue music as a career, the procedural knowledge that they will possess will ensure a richer music listening experience, and enable them to thus enjoy music listening fully.

In a musician's early stages of learning, there must be reflected on actions in a step-by-step manner, which will be more internalised in a "competent", "proficient" or "expert" musician (Elliott & Silverman, 2015:216). A performer must also make various judgements according to prior knowledge or experience of a musical work, and must consider the guidelines of the score, as well as possible ways to interpret it according to the traditions of that praxes and to their own personalised interpretation of it (*Ibid.*:216, 217). One can thus say that a musical work should be approached in all its dimensions.

2.2.2.2 Verbal musical thinking and knowing (previously referred to as 'formal musical knowledge')

Verbal knowledge refers to information which can be found in textbooks (Elliott, 1995:60; Elliott & Silverman, 2015:217). It includes facts, descriptions, and theories and therefore has a verbal nature (Elliott, 1995:60; Elliott & Silverman, 2015:217). According to Zaggle (2011), formal knowledge is the "same for everyone", while informal knowledge is "unique" to a person. Verbal information can "influence, guide, shape, and refine a learner's musical thinking-in-action", but is not essentially musical, and therefore needs to be "converted into procedural knowing-in-action" to contribute

towards musicianship/musical understanding (Elliott, 1995:61; Elliott & Silverman, 2015:218). Polanyi (2005:52) puts it this way:

> Rules of art can be useful, but they do not determine the practice of an art; they are maxims, which can serve as a guide to an art only if they can be integrated into the practical knowledge of the art. They cannot replace this knowledge.

"Contextualisation" of formal knowledge is essential for students to value it in relation to "active music making" (Elliott, 1995:61). Music notation is also an example of formal knowledge; one in which "action" should "embody" the formal knowledge (*Ibid.*). An example of how formal knowledge can be presented in a context of music making is a legato piece in violin, including slurred notes (more than one note per bow stroke), in which case the teacher may use verbal concepts about bow control and speed. Verbal knowledge is important to becoming a music teacher, but is not necessary to achieve "a competent level of musical 'amateuring', or any other level" (Elliott & Silverman, 2015:220). This leads to the importance of informal, or experiential knowledge.

2.2.2.3 Experiential musical thinking and knowing (previously referred to as 'informal musical knowledge')

Informal knowledge is firstly not knowledge that can be read in textbooks, and is sometimes referred to as experience (Elliott, 1995:63; Elliott & Silverman, 2015:220). Zaggle (2011) similarly states that it is acquired through "years of collecting experience, insight, and intuition". Elliott and Silverman (2015:220), however, state that experiential knowledge consists of three components. Firstly, they state the importance of "critical reflecting-in-action", as music making is not just about a set of routines, habits, physical skills, etc. (Elliott & Silverman, 2015:220, 221). Polanyi (2005:51) uses the examples of swimming, and of balancing and riding a bicycle: both these practices involve a set of physical rules which must be observed; yet the practitioner is not necessarily aware of them while carrying out the action successfully. There are many other factors to consider in practice, which are left out of a 'verbal' rule (*Ibid.*:51, 52). Similarly, Elliott and Silverman (2015:221) hold that there is not a verbal principle for every musical action that will always guarantee success.

"Critical reflecting-in-action", listed secondly, rather rests on making "musical judgements in action" (Elliott, 1995:63; Elliott & Silverman, 2015:220). Making good judgements depends on the understanding of a musical context and its specific practices (Elliott, 1995:63; Elliott & Silverman, 2015:220). Thirdly, the ability to make judgements in action "develops through active musical problem solving" (Elliott & Silverman, 2015:221). An experienced orchestral musician will for example know when their part is accompaniment material, and will accordingly play softer without having to be told or the help of dynamic indications. In a school ensemble, however, players may not

have developed the necessary experiential knowledge for that practice, and may just aim for the loudest sound, regardless of whether their parts are the most important at that moment. In that case, those learners would need to be made aware, and will develop the ability to make the judgement for themselves as they become immersed in the activity of ensemble/orchestral playing more often.

2.2.2.4 Situated musical thinking and knowing (as originally presented)

Situated refers to 'within a specific context'. It can refer to geographical placement (as in the house is situated on the mountains), or "placed in relation to, or in respect of circumstances" (Oxford English Dictionary, 2017). Situated knowledge will fall within the latter, although the former is in many cases included in a specific context that is referred to. The situated learning model recognises the "significance of real-life contexts in learning" (Zheng, 2010:469). In feminist literature (from which the term originated), situatedness is coined as "embodied and multiple"; a "dialogical process" (Stoetzler & Yuwal-Davis, 2002:328). Elliott and Silverman (2015:223) refer to how the "positionality of the body affect situated MTK [Musical Thinking and Knowing]". An example would be attending a live performance of David Kramer, as opposed to listening to a recording.

The idea of situatedness being multiple and dialogical, or according to Elliott and Silverman (2015:223) "one's personal knowledge of others", can be illustrated through the following example: a music teacher merely teaching the class a South African Cape Minstrel song, as opposed to inviting a real Cape Minstrel group to teach the song in both their performance style and in the way that they would have taught or learned the song. Silverman (2011:188) provides another example from her home school choir case study: when this choir is performing a song from a different culture than their own, they invite people from that culture to educate them in that culture. In this example, the people involved are of great significance to the learning that takes place.

In Elliott's and Silverman's terms (2015:222) situated knowledge can be explained as "know-how" in a specific context. Learning an instrument can also be seen as requiring know-how in a context – a certain technique should be learned, and it is situated within a certain musical practice/practices. If a student is learning to play the saxophone, a possible practice in which to employ it would be jazz, in which case they would acquire the necessary techniques required for jazz playing, and may have to place special importance on developing the skill of improvisation.

2.2.2.5 Intuitive musical thinking and knowing (previously referred to as 'impressionistic knowledge')

Elliott (1995:64) explains impressionistic knowledge by means of "intuition", or "cognitive emotions" and "knowledgeable feelings". Intuition is described by Elliott and Silverman (2015:223) as "non-verbal" and "felt". It is "an immediate apprehension", which takes place "without conscious, analytic reasoning" (Friedman, 1978:31). It is embodied knowing and knowledgeable feelings; as according to Elliott and Silverman (2015:224), thinking cannot occur without feeling, and vice versa.

Friedman (1978:38) also claims that although a person is born with intuition, they can be taught to develop the ability further, and acquire more elaborate forms of it. According to Elliott (1995:65), musicians "acquire nonverbal impressions, or an affective sense of things, while doing, making, and reflecting in specific musical contexts". In students' development of musical understanding, their "feel for" or "affective awareness" of what is important in musical settings should be cultivated (Elliott & Silverman: 224). This is supported by the statement that "intuition does not work in a vacuum", but rather builds upon "previous knowledge" (Friedman, 1978:32). This type of knowledge thus contributes to musicianship in the way that it gives one the ability to make "musical judgements in action" (Elliott, 1995:64). An example of how impressionistic knowledge is at work is when a violinist 'feels' that a work should be played mostly in the bottom half of the bow with much arm weight to convey a rough, heavy and unrefined feeling by means of articulation. This feeling was acquired through a knowledge and understanding of the particular style of the musical work.

An intuition may also be "false" or ignorant, "misguided", or a "mistaken judgement" (Friedman, 1978:31). As intuition can also be misguiding, the role of a music teacher is also to recognise when their own intuition is causing "bias, misjudgement, and misprediction" (Elliott & Silverman, 2015:224). As Haimovsky said to Silverman (2008:263) about his piano teacher: the teacher "distorted everything that my intuition, if left alone, would have understood". He also claims that without the intervention, he "instinctively" would have "found" his "way to different styles" (*Ibid.*). In a real-life situation, a music educator may open themselves up to a student's own interpretation of a musical work, instead of believing that their own feeling of the work is necessarily the only valid one. According to Silverman (2008:264), "individual, creative interpretation, finding and expressing 'one's own voice'", will not develop if the teacher dominates, thereby suppressing the learner's "individual risk-taking and expression". Silverman (2008:265) continues that "imposing" specific "interpretations on students", may be less constructive than discussing "multiple solutions". That being said, an educator should also guide a student when their judgements may be inappropriate: when a student 'feels' that a Mozart violin concerto should be played with heavy bow strokes and wide, intense vibrato, an educator should guide them as to why this is inappropriate in that particular style. Intuitive

knowledge is acquired through active music making and listening, and guides musicians to make "expressive and creative musical judgements in action" (Elliott & Silverman, 2015:225). Through the listening in complement with the making, one can say that a student/musician will cultivate the necessary knowledgeable feelings to make appropriate creative musical judgements.

2.2.2.6 Appreciative musical thinking and knowing (newly added)

This musical knowledge is the ability to recognise the creative potential in musical materials (Elliott & Silverman, 2015:225). An arranger may for example see the potential in a single-line melody to become a work for an instrumental ensemble. According to Elliott and Silverman (2015:225), it is not something that only some are born with, but can be "taught", "learned" and "developed over time". A practical example of cultivating this knowledge may be to provide a music learner with a melodic motif, which they must elaborate through improvisation on their instrument.

2.2.2.7 Ethical musical thinking and knowing (newly added)

This involves music makers using their abilities to do "good" (Elliott & Silverman, 2015:225). Silverman's (2011:186) home school choir case study provides an example of doing good through music: the director aims to teach the learners how to use music to reach out, by performing in various social settings like homeless shelters. This can especially be utilised in school and community music, as there are many situations that raise ethical concerns or problems (Elliott & Silverman, 2015:225). Students can for example learn something about the "ethical treatment of each other" in settings like rehearsing and performing together (Elliott & Silverman, 2015:225). In the case study by Silverman (2011:186) of a home school choir, for the learners to care about one another is central to their rehearsals and activities. This may also include how to handle musical disagreements amongst each other, without getting personal, or conversely, not letting personal disagreements impact music making together negatively.

Ethical knowledge also entails the suitability of certain music for a specific audience. The example given by Elliott and Silverman (2015:225) is what students can learn from discussing the suitability of the lyrics of a popular song for a specific target group "audience". If a popular Afrikaans singer is known to be a role model for young children, is it appropriate for him to use sexually evocative lyrics in his songs, or would the responsibility fall on adults (teachers, parents) to make the judgement of what is appropriate for young children to listen to? One may consider this aspect on a smaller scale: the titles of pieces. Is it ethically appropriate to let a learner play a piece titled *Sambo's Escape* (Brown & Dyke, c1929:12) on the violin? Sambo is a derogatory term for a black person, and was

possibly less inappropriate at the time when *The Hullah Brown-Spencer Dyke first children's violin book* was written).

Elliott and Silverman (2015:226) provide a different example: the choice of Von Karajan to conduct for Hitler throughout World War II, despite the "criminal acts of the Third Reich", in contrast to Erich Kleiber, who left Germany to defy these acts. One can read in this example that a musician is faced with decisions of not only what to perform, but whom one is willing to perform for or work with to be considered ethically mindful. It can be taken a step further: should this be considered when a listener chooses whose recording he will listen to, and discussed if a music teacher chooses a recording by Von Karajan for class listening? What are the implications for listening to or performing Wagner's works, knowing about his anti-Semitic ideologies? Whether a musician, listener or teacher chooses to include works with controversial ethical implications, they should be aware of such implications to make informed decisions.

Musical works are created within a historical and cultural context. A performer or listener should situate musical works that are to be performed or listened to within the specific culture and context within which it was created, and recognise underlying ethical issues raised through that musical work (Elliott & Silverman, 2015:226, 227). The example provided was Duke Ellington's "Daybreak Express", as it represents African-American culture, which includes racism of black people during that time in America; it is thus situated within a specific time and place (Elliott & Silverman, 2015: 226, 227). Although one can enjoy this musical work without understanding the context, one would be overlooking "something significant" (Elliott & Silverman, 2015:226, 227). Similarly, Silverman (2008:266) discusses the ethical issues involved when interpreting a musical work to be performed. The performer has an obligation to themselves towards their own individual expressiveness, while at the same time being obligated to be "faithful" to the musical score (*Ibid.*). This also entails a full understanding of the context of the work to interpret it authentically. Recognising all dimensions of a musical work provides one with a richer understanding of the narrative, and ideological potential of musical works.

2.2.2.8 Supervisory musical thinking and knowing (as originally presented)

Supervisory knowledge is a situated type of musical knowledge (Elliott, 1995:67). It entails to regulate one's musical thinking and "in action" as well as on the "long-term" in the "development of one's musicianship" (Elliott, 1995:66). It includes a type of musical imagination, which enables one to have clear "musical images, goals and strategies" in mind, and in turn contributes towards mindful practising and enjoyment (*Ibid.*:66; Elliott & Silverman, 2015:228). It involves forming appropriate musical images – "imagination-in-action" (Elliott & Silverman, 2015:227). A student who uses this

"heuristic imagination" in their "musical self-management" will likely "identify with, care for, and enjoy" their musicing (Elliott & Silverman, 2015:228). Music educators may assist in this pursuit by creating appropriate musical images, for example imagine having bubble gum stuck to your fingers while playing *legato* on the piano keys. According to Bonneville-Roussy and Bouffard (2015:699), formal practice – "goal-directed", "focused", and employing "relevant" practising "strategies" – is necessary to master increasingly "complex" musical "tasks", which will not be solved by mere repetition. Teachers can help with goal-setting by for example saying let's hear how *legato* and *piano* you can play this section. These goals can be written down as goals for home practising. Strategies for effective practising may also be assisted with. If a violin learner must master a difficult bowing technique together with difficult notes, the teacher can for example suggest that the learner plays on the open string first to master the bowing technique; then to master the notes without the bowing technique.

Supervisory knowledge also entails the ability to act appropriately under pressure (Elliott & Silverman, 2015:227). This can be aided by educators by incorporating opportunities for uninterrupted playing when a student is already fairly in control of a musical work. Instead of constantly stopping the student and saying what they did wrong, the educator can allow them to play and experience moments of being under pressure, which they must 'fix' to the best of their abilities. This will prepare a musician for similar occurrences in a real-life performance.

In summary, supervisory knowledge develops when music education rests on "musical actions, interactions and transactions" with life-like musical challenges (Elliott, 1995:66; Elliott & Silverman, 2015:228). Supervisory knowledge can also develop through discussions with "teachers, peers and oneself", about one's "musical understanding", although it is essentially a process which occurs when one is monitoring and coordinating one's own musical knowledge in action (Elliott & Silverman, 2015:228). A music educator can and should thus guide a student in the processes described above to be able to oversee their own musical understanding in action.

Musical understanding is a complex concept. Elliott divides it into different ways of musical thinking and knowing, although they all work together in different ways towards the same goal of musical understanding. The following example will draw upon the different ways of musical thinking and knowing: when performing a Mozart sonata on the piano, one will have some **verbal concepts** in mind, such as how articulation should be in that musical style. One will also draw upon **experiences** with previous encounters with the style and similar musical works. That specific musical work is **situated** within a context of similar works, and within the practice of piano playing, which entails, for example, efficient use of fingers. **Intuitively**, one will feel how to play the phrases appropriately to that style. To expand the example even further, the musician may recognise and **appreciate** the

potential of the work to be arranged creatively into a popular work. **Ethically**, the performer will consider the historical and cultural context of the work; what the purpose of the work was, and how it perhaps broke away from the norms of the time. Pertaining to **supervisory musical thinking and knowing,** one will devise mindful practise strategies and set goals, together with creating appropriate musical images, like imagining one's left hand as a gentle stream flowing, to play the *alberti* bass lightly and smoothly.

The section on musical understanding provided an overview of Elliott and Silverman's account of what musical understanding entails, and discussed its relations to other authors' opinions. The discussion of the different ways of musical thinking and knowing forms the basis for the coding framework of musical understanding. For clarity of analysis, the different ways musical thinking and knowing are presented as subthemes, and codes were assigned to indicate how it manifests. Procedural musical thinking and knowing is viewed as an overarching way of thinking and knowing, containing within it the other types of musical thinking and knowing. Therefore, it contains codes that refer to general ways in which all the types of musical thinking and knowing contribute towards musical understanding (Appendix 2). *Music making takes place* is listed as a code under procedural musical thinking and knowing – this refers to whether the learner gets enough opportunity to make music in the lesson (as opposed to the teacher talking most of the time), as according to Elliott (1995:56), musical understanding is demonstrated "practically" instead of "verbally". In the next part, musical understanding will be linked to Flow, and enjoyment versus pleasure.

2.2.3 Musical understanding and Flow

Central to Elliott's notion of musical enjoyment is the concept of Flow, by Csikszentmihalyi. A brief introduction to this theory will be provided, together with a clarification of the difference between pleasure and enjoyment.

2.2.3.1 Introduction to Flow theory

When information from the outside environment is compatible with one's personal goals and values, there is a positive experience of satisfaction (Elliott, 1995:114; Elliott & Silverman, 2015:367). This is what Csikszentmihalyi calls optimal experience, autotelic experience, or Flow (Elliott, 1995:114; Elliott & Silverman, 2015:368). People experience a state of Flow when they are engaged in an activity or goal that is both challenging, and matched to their skills (Csikszentmihalyi, 2017). Flow is also described by Elliott (1995:114; Elliott & Silverman, 2015:368, 369) as self-growth and enjoyment. Optimal experience arises from extending the self (Csikszentmihalyi, 1990; Elliott,

1995:114; Elliott & Silverman, 2015:368) when one's body or mind is "stretched to its limits" (Csikszentmihalyi, 1990), and being fully immersed in the "present moment" (Csikszentmihalyi & Nakamura, 2014:239). Also in line with humanistic and positive psychology, developmental psychology found that people have an innate tendency towards "challenge-seeking behaviour" (Custodero, 2002:3). Pursuing a goal brings order to consciousness because a person must forget everything else in that moment to focus attention on the current challenge (Csikszentmihalyi, 1990). Humans experience the activities that "strengthen and order" the "self" more "satisfying" and "enjoyable" than "everyday activities", and therefore continue to pursue them (Elliott & Silverman, 2015:368). This relates to notions in humanistic psychology, where the "healthy" person is viewed as seeking activities which create tension and relaxation, and not just striving to be in a state of homeostasis, as psychoanalysis holds (Buhler, 1971:383). The tension described reminds one of engaging in activities with a significant challenge to master. Important conditions for self-growth and enjoyment are a challenge and the necessary skill to master it (Elliott, 1995:115; Elliott & Silverman, 2015:369). The following are "elements to the flow state" (Garces-Bascal, 2016:434):

- Clarity of goals and immediate feedback (to know how well he/she is doing);
- Challenges that matched the personal skills of the individual;
- Merging of action and awareness;
- Absolute focus and concentration on task at hand;
- A sense of potential control;
- Loss of self-consciousness;
- Altered sense of time.

Musical activity is a source of Flow experience. It has "multisensory requirements," and thus demands "full involvement" (Custodero, 2002:3). Performing, listening, or composing for instance offer "unique challenges" for which "full attention" and "absorption" is required (*Ibid*.:4). In music engagement, a person's level of musicianship/musical understanding should match a musical challenge for Flow to occur or differently put, for his / her "powers of consciousness" to be "completely engaged" (Elliott, 1995:121; Elliott & Silverman, 2015:380). According to Csikszentmihalyi (2017), the experience of Flow leads to increased positive feelings, "performance, and commitment to long-term, meaningful goals". This statement contributes towards supporting musical enjoyment, by creating Flow experiences, which may contribute towards lifelong musical enjoyment.

2.2.3.2 Enjoyment (versus pleasure)

According to M. Csikszentmihalyi and I.S. Csikszentmihalyi (1988:24), one of the most natural and primitive ways to "build the self around a hierarchy of goals" is to centre one's goals around one's genetic programming. Pleasure, or "instant gratification" occurs when order in the consciousness is restored when biological and social needs are satisfied (Elliott, 1995:115; Elliott & Silverman, 2015:369). Such needs or goals will predominantly include eating well, being comfortable, healthy and sexually satisfied (M. Csikszentmihalyi & I.S. Csikszentmihalyi, 1988:24). Pleasure can occur with little or no conscious effort, and can be induced by being electrically and chemically stimulated in the brain (Elliott, 1995:115; Elliott & Silverman, 2015:369). Exclusive pursuit of pleasure can however not lead to human development (M. Csikszentmihalyi & I.S. Csikszentmihalyi, 1988:25). Enjoyment results from moving forward in psychological growth and complexity; from unusual investment of conscious efforts (Elliott, 1995:115; Elliott & Silverman, 2015:369). It can also be referred to as optimal experience, autotelic experience or Flow by Csikszentmihalyi (Elliott, 1995:115; Elliott & Silverman, 2015:369). In optimal experience, we feel a deep sense of "exhilaration" and enjoyment, which does not occur in "passive, receptive, relaxing times" (Csikszentmihalyi, 1990).

These sections about Flow, and enjoyment versus pleasure were included to clarify part of the basis of Elliott's praxial philosophy of musical understanding. It shows the reader that enjoyment refers to engaging in optimal challenges, and not to passive relaxation.

2.3 Connecting SDT with musical understanding

There are points of convergence between Elliott's praxial philosophy of musical understanding and SDT's account of human motivation. According to Elliott and Silverman (2015:367), humans do not only have "biological and social deficiency needs", but also "achievement needs". For that reason, many activities are undertaken because they "engage our powers of understanding" (*Ibid.*). As the current research is concerned with applying the SDT in the individual music lesson, the previous applications of SDT in music education, as well as the points of convergence between musical understanding and SDT, will be discussed in the next section.

2.3.1 SDT in music education

Music tuition in a specific instrument is often taken up with much initial enthusiasm. In many cases, it is also children's parents' decisions for them to start instrumental tuition. Sustained commitment and

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devotion can however be challenging for children, and the processes that sustain motivation are often not thoroughly understood (Evans *et al.* 2012:613). For music departments/schools to function optimally, it is necessary for teachers to understand these motivational processes in the music teaching-learning context (*Ibid.*). According to Evans (2015:65), a comprehension of motivation is essential for addressing questions of "how and why" instrumental tuition is undertaken, how people "persist", how they achieve success or cease learning the instrument. As motivation is such a vital aspect of music education, it would seem worthwhile to have a thorough theoretical framework of it.

Music education still must agree on and "converge" in a "single theoretical perspective" of motivation (Evans, 2015:66). Recently, music education research has utilised SDT to address the issue of motivation (*Ibid.*). SDT is beneficial for this because of its "breadth" and the way that many different behaviours can be accounted for (*Ibid.*). According to Evans, however, a "conceptual review" of SDT in music education does not yet exist in the literature (*Ibid.*:67). Some of the current applications and previous research applying SDT to music education will be discussed in this section.

In 'pre-SDT' music education research, persistence and dropout were important points for study (Evans, 2015:66). In SDT, these points have been studied in fields where self-initiation and self-regulation are required, such as in educational settings (*Ibid.*). Children often experience their music lessons as "frustrating, stressful or boring", and it is shown that the way they experience their lessons will contribute towards whether they will persist or drop out (Kupers *et al*., 2015:334). A thorough understanding of SDT can aid music educators in improving the experience of music lessons for the learners.

Evans (2015:66) also states the strong emphasis that SDT places on the quality of motivation instead of just the quantity. In music education, this is relevant because music practising needs to be "deliberate and effortful", and quality practising strategies should be employed (*Ibid*.). According to Bonneville-Roussy and Bouffard (2015:698), formal practise involves being goal directed, focusing, self-regulating, and employing "deliberate practi[s]e strategies". For focused practise time, a musician/student needs to know where they need to improve (generally and specifically), before the session commences, and when and how to use their acquired skills (*Ibid.*). The more self-determined a motivation is, the better one may say quality and deliberate practising will occur through a learner's own efforts. Music educators should thus understand how to maintain learners' intrinsic motivation and facilitate the process of internalisation of extrinsic motivation.

In music lessons, it can be predicted that not only intrinsic motivation, but also extrinsic motivation will be prevalent for the less enjoyable but important aspects of learning an instrument. It has also been found that "persistent musicians" benefitted from "external sources of motivation" in the early

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stages of learning, which provided "comfort, security and encouragement" (Davidson *et al*., 1995/1996:41). As they progress, however, the motivation becomes more "intrinsic and self-sustaining" (*Ibid.*:44). The reversed pattern was found with children who ceased their learning (*Ibid.*). It is also possible that intrinsic and extrinsic motivation can co-exist within the same learner and both contribute to positive outcomes (Kupers *et al*., 2015:334). A violin pupil may practise for the love of violin playing (intrinsic) and to win a competition (extrinsic) (*Ibid.*).

One of the most important ways in which music lesson experiences may be shaped is the extent to which learners' basic psychological needs are satisfied. According to Evans (2015:72), imbalance in the fulfilment of needs can create conflict between the needs. A pupil who obsessively pursues success in music at the expense of friendships is fulfilling the need for competence in imbalance to the need for relatedness (*Ibid.*). Further research is needed to determine which experiences in the music education context may satisfy the psychological needs (*Ibid.:*71). There are, however, a few examples of need-satisfying versus thwarting situations (as shown in Table 2-1):

Table 2-1_Needs-supporting versus needs-thwarting in music teaching (Evans, 2015:72)

Needs supporting	Needs thwarting
Competence	
Encourage a growth, rather than a fixed, mindset (Dweck, 2000).	Maintain perfectionistic standards in music lessons.
De-emphasize notions of talent and fixed ability, and emphasize effort.	Compare musical achievement and ability to that of peers.
Praise efforts and strategies (e.g., checking the time signature and tempo before attempting sightreading) rather than outcomes and abilities (e.g., sightreading well, pleasing a crowd).	Emphasize norm-referenced evaluation criteria as the main outcome of music learning (e.g., the Australian Music Examinations Board [AMEB], Trinity College London [TCL]).
Teach practice strategies that will lead to the development of new skills.	Emphasize success in music competitions and eisteddfods as indicators of success in music learning.
Relatedness	
Facilitate interactions with peers (e.g., within a music studio where students may not otherwise interact).	Maintain strict standards.
Be perceptive of how music learning affects the student's role in peer groups.	Withhold affection and pleasantry. Ignore affect and mood of students.
Educate parents on the demands necessary for learning so as to minimize conflict (e.g., about the noise of practice in the home).	Emphasize formal learning activities as the only valuable ones.
Develop a warm, bidirectional relationship with the student.	Manipulate students through feelings of guilt or shame for not following instructions.
Acknowledge that music may be one of many competing activities and that friendships may at times be more important than practice.	
Autonomy	
Provide rationales when providing instructions (e.g., explain the benefits of drilling scales or practising sight-reading).	Pressure students to perform well. Follow the same lesson plan each lesson.
Acknowledge students' feelings (e.g., performance anxiety).	Instruct students to do things "because the teacher said so."
Provide choice of repertoire and learning activities (as long as there are not so many choices that it is overwhelming and thwarts competence).	Exclude students from planning learning activities.
Assist students in developing meaningful practice goals (e.g., master a particular section of music).	Emphasize rules and regulations. Assign practice tasks without explaining why or how to do them.
Encourage creative activities such as improvisation and composition.	Assign arbitrary practice goals (e.g., practise for 20 minutes)
	Use rewards and punishments to manipulate student behaviour.

Competence fulfilment may occur through achievement, and has a positive effect on motivation (Evans, 2015:68). Silverman (2008:263, 264) advises that teachers should place importance on "students' personal and musical self-efficacy". This self-efficacy can be translated into feelings of competence. Silverman (*Ibid.*:264) names the ways in which to develop this as "a steady growth in knowledge", musical challenges matched to skills, increasing of "performance accomplishments", experiencing of intrinsic motivation, and musical enjoyment resulting from it. Feelings of inability and excessive difficulty levels may thwart the need for competence (Evans, 2015:68). In a usually

voluntarily activity like music tuition, a lack of competence support may lead to ceasing of lessons (Evans, 2015:68). Bonneville-Roussy and Bouffard (2015:697, 698) believe that perceived competence predicts the motivation to practise, and the successful outcomes of improved performance in turn leads again to competence.

Relatedness is especially prominent in music learning contexts, as it includes relationships with parents, family, peers and teachers (Evans, 2015:68, 69). The teacher-student relationship is a particularly important one in this sense (*Ibid.*:69). Throughout the different stages of music learning, it has been shown that the teacher-student relationship undergoes changes in its dynamics (*Ibid.*). In the early stages, "personal warmth" from the teacher is of utmost importance; "pedagogic competence" is not enough (Davidson *et al.*, 1995/1996:44). The early teacher-student relationship may be based on enjoyment and friendly interactions, and gradually moves to a relationship based on high standards and mastery (Evans, 2015:69). Evans (*Ibid.*) does, however, conclude that the initial friendly and warm relationship may be an important backdrop for later focus on competence on mastery. However, the "development of musical excellence" is not only dependent on the teacher-student interactions; high levels of achievements may remain unattainable without positive parental involvement (Davidson *et al.*, 1995/1996:44), as it is hard for children to spend a lot of time on musical practising and learning in "complete isolation" (*Ibid.*:41). Important to note is that "parental encouragement through support" is more important than the parents' musical ability to aid the child's "musical development" (*Ibid.*).

Autonomy support is often neglected in traditional classical music training, as teachers decide upon the lesson content, homework, and sometimes choice of repertoire (Evans, 2015:70). According to de Bézenac and Swindells (2009:24), it seems "probable" that "musicians who are used to taking responsibility for their own musical development will continue playing music for its own sake after graduation". Silverman (2008:264) holds that a learner's own "interpretation", and "expressing" their "own voice", and willingness to take risks will not develop properly if supressed by "fear, embarrassment, and teacher domination". She proposes a constructivist approach, as learning best takes place when learners gradually become more capable of finding and solving musical problems on their own, with guidance from and dialogue with their teachers, as this will enable them to teach themselves in the future (*Ibid.*). This highlights the importance of autonomy support in music education, as it will contribute greatly towards the goal of lifelong musical enjoyment as held by Elliott and Silverman.

2.3.2 Music teachers

A good music teacher should be both musically proficient and a good educator. They should thus possess musicianship and "educatorship", and not just one of the two (Elliott, 2005:12). As already written under *relatedness*, in the early stages of instrumental learning especially, warmth from the teacher is of utmost importance to the learners, and not just the ability to teach music competently (Davidson *et al.*, 1995/1996:44). Elliott and Silverman (2015:18, 19) summarise a teacher as follows: "A person" "who engages in teaching" "something" to a "person or persons" with the "intention" that learners will "construct their own knowledge". The process of becoming an excellent music teacher relies on reflecting "in and on" the teaching process of matching learners' musicianship with appropriate musical challenges (Elliott, 2005:12). Another relevant aspect of music educatorship is assessment and evaluation, how they differ, and how both are applicable to music education.

Assessment "gathers information" about learners' progress – it provides "constructive feedback" and thus "benefits" them "directly" (Elliott, 2005:13). At the same time, it "provides useful data" to teachers, parents, and the educational community (*Ibid.*). Assessment is the responsibility of teachers and learners, as learners need to learn to assess their own musical development (*Ibid.*).

Evaluation entails grading, ranking, and other "summary procedures" for "student promotion" and "curriculum evaluation" (Elliott, 2005:13). Conventional methods of evaluation, such as written tests and assignments, are inappropriate in music, as they "rely too heavily on linguistic thinking" (*Ibid.*). According to Priest (2002:48), external (or formal) ways of evaluating creative processes such as improvisation and composition tend to undermine creativity; therefore, students should rather evaluate their own creative efforts than to associate it with grading or "teacher approval/disapproval".

2.3.3 SDT and Flow

Important to note is Deci and Ryan's critique on the Flow theory. According to them, Flow has points of convergence with SDT: the CET with its focus on intrinsic motivation and competence as an essential need to be fulfilled, relates to Flow's concept of enjoyable activities which is pursued for the sake of the activity itself, and that when challenge and proficiency meet (resulting in competence), enjoyment can be achieved (Deci & Ryan, 2000:260).

Deci and Ryan (2000:261) identified as a point of divergence, that Flow does not fully take autonomy into account, and altogether does not consider psychological needs satisfaction. They provide the example of a man who sits at the keyboard and may experience pleasure because of the beauty of the

piece he is playing; he will however not enjoy this activity if he felt forced to play (autonomy thwarting) (*Ibid.*:230). According to SDT, autonomy is an "important predictor of Flow", seeing that Flow is a "prototype" of intrinsic motivation (Deci & Vansteekiste, 2004:27). Fulfilment of the needs may predict whether an optimal experience will lead to Flow (Deci & Ryan, 2000:261).

As a consequence of not acknowledging psychological needs, Flow does not provide an account for extrinsic motivation and how it can become more internalised (as derived from OIT) (Deci & Ryan, 2000:260). In this study, however, Flow will be used together with SDT for the points of convergence rather than the divergences.

2.3.4 Mindfulness (SDT) versus Self-esteem (Elliott)

Self-esteem, according to Elliott (1995:119, is a consequence of self-growth. It is the feeling that one has "achieved" or "possesses desirable qualities" (*Ibid.*). One's knowledge meeting a challenge leads to self-growth, self-knowledge, and enjoyment, and that in turn leads to self-esteem and happiness, which results in the "improved quality of life" (*Ibid.*).

SDT has an alternative view of self-esteem. Self-esteem is placed in two categories: contingent self-esteem, and non-contingent self-esteem (Ryan & Brown, 2003:72). When someone has contingent self-esteem, their sense of worth depends on external outcomes such as achieving certain goals, and appearing to others in a certain way (*Ibid.*). People with non-contingent self-esteem do not have a preoccupation with esteem; they believe themselves to be "fundamentally" worthy of "esteem and love" (*Ibid.*). The sense of worth is determined by who one is, rather than by what one achieves (Hodgins *et al.*, 2007:189). This perspective of esteem is more likely to predict "optimal health" (Ryan & Brown, 2003:71). The distinction can also be referred to as "defensive" or "genuine" self-esteem (Hodgins *et al.*, 2007:191).

Self-esteem is not viewed as a need (Ryan & Brown, 2003:74). People's preoccupation with self-esteem is rather a sign of "need deficiencies", as people whose significant others loved and valued them contingently, tends to "actively" esteem or disesteem themselves (*Ibid.*). Self-esteem does not correlate with SDT's criteria of needs, as it does not necessarily lead to "greater growth, integrity, and well-being", but may lead people into doing activities for the sake of others' approval, and not because they personally value it (*Ibid.*). From this point of view, a "paradox" of self-esteem is formulated: "If you need it, you don't have it, and if you have it, you don't need it" (*Ibid.*).

The term that SDT favours over self-esteem, is mindfulness. It is defined as "open and receptive awareness" (Vansteekiste & Ryan, 2013:274), and "non-judgemental" awareness of what is "occurring in the present" (Ryan & Brown, 2003:75). Mindfulness is also associated with autonomy and self-regulation (Vansteekiste & Ryan, 2013:274). Autonomy increases attentiveness in "performance monitoring" by "promoting awareness of error-related distress" (Legault & Inzlicht, 2013:125). There is no fixed concept of the "self" that needs to be protected or enhanced (Ryan & Brown, 2003:75).

2.3.5 Summary of convergences between musical understanding and SDT

Elliott's supervisory musical knowledge includes self-management, and goal setting, which overlaps with SDT's self-regulation (OIT). Autonomy within the learner would be especially important for this self-management. Elliott also states the identification with their musicing if learners apply this musical knowledge successfully. Identification is a more self-determined type of regulation on the extrinsic motivation continuum, through which a learner identifies with the importance of an activity for a desired outcome, and is therefore autonomous in carrying it out. One could say that learners need to identify with the need for goal-directed practising for the desired outcome of musical development and, ultimately, enjoyment. The ability to practise autonomously and goal-directed, can be considered vital to the pursuit of lifelong enjoyment – after formal music tuition is done, former music learners will have to regulate their engagement in musical activity themselves.

The principles of Flow, which contributes to musical enjoyment, can especially be applied to SDT's intrinsic motivation. Intrinsic motivation can also be enhanced by optimal challenges. Intrinsic motivation's benchmark, curious exploration by a learner, can apply to appreciative musical knowledge, which can be developed by creative activities in music, such as improvisation. Possessing and maintaining intrinsic motivation, which includes exploring creatively, is another important key to lifelong enjoyment, as music will be continued to be pursued out of mere interest and enjoyment.

This chapter was a literature review, mainly overviewing and discussing SDT and musical understanding. It informed the framework that was set up for analysis of qualitative data. Codes were derived from the mini-theories of SDT selected for the study, ideas of applying SDT, specifically applied to education and music education, and the eight different ways of musical thinking and knowing, as determined by Elliott and Silverman. The research question and sub-questions are also partially answered through the literature, as shown in chapter five. The next chapter will be an in-depth discussion of how the study was conducted.

Chapter 3 : Research Methodology

This chapter explains how this research was conducted, and why the specific methods were chosen. A description of the underlying philosophy is provided, followed by a description of the mixed methods approach which followed from it; then the design (multiple case studies), from which various sources of data were derived. The method consisted of lesson observations, which were video recorded (qualitative) and questionnaires (mainly quantitative, with a qualitative section included). In this chapter, it is outlined how an analysis framework for the lesson observations was employed, how standardised SDT questionnaires were chosen and adapted according to the study, as well as statistical analysis of this quantitative section.

3.1 Research philosophy

When discussing research philosophy, it is important to consider the philosophical assumptions: ontological, epistemological, axiological, and methodological. A brief description of each will follow, as well as how it applies to the current study:

- **Ontology** refers to the nature of reality (Cresswell, 2013:20). In qualitative research, ontology applies to the idea of the "multiple realities" that researchers are faced with, which can be presented by using multiple forms of evidence, participants' words and different perspectives (Cresswell, 2013:21). In the current study, the multiple forms of evidence include observations (that were video recorded), and questionnaires with a qualitative and quantitative nature. In the observations, the researcher was faced with direct words of participants, as well as in the qualitative section of the questionnaire. One could see the teachers' perspectives during observations, and in some cases the learners', which would then be confirmed by their questionnaires. In the cases where learners were quieter or less open, the questionnaires served to illuminate their perspectives.

- **Epistemology** refers to what can be known about the world, and how it can be known (Goduka, 2012:131). The epistemological assumption in qualitative research entails getting as close as possible to the participants, so that knowledge can be known through the subjective experiences of individuals (Cresswell, 2013:21). In the current study, observing lessons as it would naturally occur served this purpose.

- **Axiology refers** to the role of values in research (Cresswell, 2013:20). It is also described as "what is worth knowing and why" (Goduka, 2012:131). This assumption assumes that the

researcher brings values into a study, and in the case of qualitative research, makes their values and biases known (Creswell, 2013:21). The current researcher's background and possible biases is stated under the section of *Validity* in this chapter.

- **Methodology** refers to the process of research (Cresswell, 2013:20). In a qualitative study the methodology is seen as "emerging" as the study progresses (Creswell, 2013:22). In the current study, this process especially took place after completion of a pilot study, where the researcher experienced how the best results could be obtained, and modified the process of data collection accordingly. This is further discussed in this chapter under *Pilot Study* and *Research Methodology.*

A pragmatic philosophy is underlying the current study. The pragmatic research philosophy is the only one that allows for mixed methods, and can include both quantitative and qualitative data (Cresswell, 2003:12). As qualitative and quantitative data form part of this study, the research philosophy entails interpretivism (the samples are small, and are analysed in-depth), and positivism (the questionnaires are standardised and thus have better potential for objectivity). Pragmatism is also described as oriented towards practices in the real world (Cresswell, 2003:6). This philosophy holds that the research question is the most important determinant of the research philosophy (Dudovskiy, 2016). The "problem being studied and the questions asked about the problem" are the important aspects, rather than an extensive focus on the methods (Cresswell, 2013:28). The current study was conducted in a similar way: the problem was identified, the questions were asked, and then the researcher decided on the best ways of getting the desired results to answer the questions.

Both musical understanding and support for the SDT are examined in this study. Elliott's praxial philosophy of music education focuses on music making in action; thus, the most appropriate way of gaining insight into a learner's musical understanding in his/her instrumental learning would seem by observing a lesson; therefore, the qualitative aspect, which is interpretative in nature. A learner's whole lesson was observed, video recorded, and interpreted according to parameters of musical understanding. SDT is, however, also intertwined, as the support thereof can also be observed in the interactions between learner and teachers; therefore, that aspect is analysed through the same process. The SDT aspect of the study can also be examined through standardised questionnaires, where the learners' perceptions of SDT support in their instrumental learning become clear. The precise nature of the data gained through questionnaires makes it more objective than what is viewed in the lessons. An answer has only one meaning, and only one answer could be chosen for every question. However, a pragmatic philosophy even allows for qualitative data to emerge from a quantitative "research tool" – additional comments next to a multiple-choice question can also be regarded as data (Feilzer, 2010:11, 12). In this study, a positive comment made by a learner about the teacher (in the multiple-

choice section) can hold valuable insight into the relationship between learner and teacher, and can be included for discussion in a pragmatist philosophy. The researcher also decided to include a qualitative questionnaire (designed by the researcher), where learners could report on all aspects of their levels of musical enjoyment. This supported the findings in the observations, and in some cases contradicted it, or just shed light on how learners really perceive their instrumental learning. This is in line with the notion that pragmatists will use "multiple methods" of data collection, from "multiple sources" (Cresswell, 2013:28). The research philosophy of this study can be visually represented as shown in Figure 3-1.
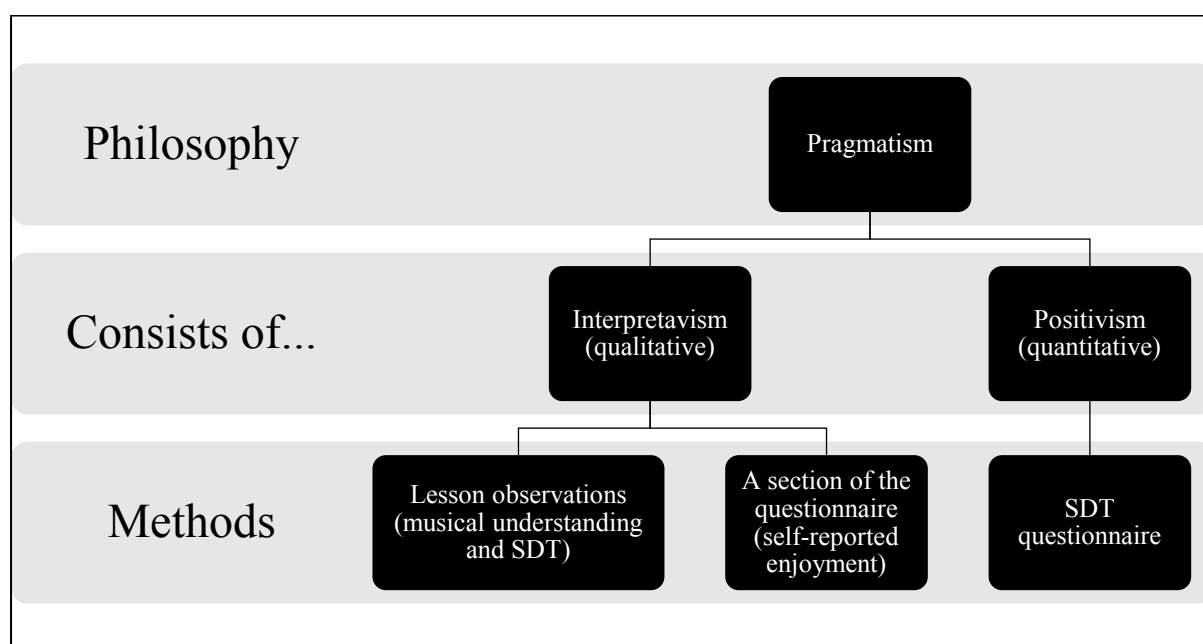
Figure 3-1_Research philosophy

3.2 Research approach

This study used a mixed methods approach in conducting and analysing case studies. A mixed methods approach may be characterized by both "predetermined and emerging methods", "open- and closed-ended questions", "multiple forms of data drawing on all possibilities", and "statistical and text analysis", and is based on "pragmatic grounds" (Cresswell, 2003:17, 18). The current study used statistical analysis (quantitative data from questionnaires were analysed through Analysis of Variance), and textual analysis (qualitative data from observations that were video recorded and transcribed into text, and the textual answers in the qualitative section of the questionnaires). The quantitative questionnaires had closed-ended questions, while the qualitative section of the questionnaires, and the observations were open-ended. The observation findings had to be interpreted by the researcher, and the qualitative questions on the questionnaire were optional to answer, and were open to participants' interpretations. Bryman (2007:9) furthermore suggests that bringing

quantitative and qualitative findings together in a mixed method, as opposed to treating the different findings as "separate domains", can potentially provide insights that could not otherwise be gathered. Through triangulation, quantitative and qualitative data sets are compared to find possible concurrences, differences, or both; the one method's strengths compensate for the other's weakness, or the strengths add to each other (Cresswell, 2009:213). In this study, the researcher intended to bring data from different methods of collection together to better address the research question, but rather through crystallisation. In collecting the data, the researcher also found that the qualitative and quantitative findings do support and strengthen each other, or illuminate issues that would otherwise be overlooked. The questionnaires (both the quantitative and qualitative data) for example exposed that one particular teacher's learners do not generally perceive their teacher as SDT supportive, while it was not clear in the lesson observation, as the teacher's strong sense of cultivating musical understanding could overpower the psychological aspects, and the teacher's actions during the observations seemed to qualify as SDT supportive. The mixed methods approach in this study thus serves to provide a rich account of the different aspects in the problem being addressed.

The current study is empirical, as it relies on primary data, and it follows a deductive approach. Deductive reasoning takes an existing theory as point of departure, and tests that theory's validity under specific conditions (Dudovskiy, 2016). An approach like this can be especially favourable when there is sufficient literature available on the subject (*Ibid.*). The current study used two existing theories as its premises: the SDT, and that learning musical understanding will lead to musical enjoyment (and hopefully lifelong musical enjoyment). The theories were applied in a specific context: individual instrumental lessons. The testing of the theories is in that the researcher aimed to determine how SDT and musical understanding can contribute to or even ensure musical enjoyment. It is qualitative in the sense that it is descriptive of musical understanding, learner enjoyment as well as the extent to which teachers apply SDT. The quantitative aspect of the study is the standardised SDT questionnaires that the learners answered, with multiple choice answers, which were statistically processed.

3.3 Research design

Research was conducted as multiple case studies of different individual instrumental lessons. Merriam (2002:8) broadly defines a case study as "an intensive description and analysis of a phenomenon or social unit as an individual, group, institution, or community". Cresswell (2003:15) describes it as the exploration of an event, activity, process, or individual/s in depth. Yin (2013:321) adds that the case is "set within its real-world context". According to Noor (2008:1603), case studies are especially useful in comprehending a "particular problem or situation in great-depth", and for cases that have

plentiful information to gather from it. The current study could be seen as a description of individuals, a group, a community and a process: every teacher is to a certain extent described as individual, and learner's personal accounts are also viewed individually; each teacher with their learners form a group that is described, and all the groups together can be seen as representative of the community of music teachers and learners in schools. The instrumental learning that takes place is a process. It is in depth, as it collected data from different sources and could therefore have a broad perspective. The real-world context in this case was the settings of how the individual instrumental lessons would have occurred naturally. A case study is, however, not only characterized by a "topic of investigation", but by the "unit of analysis" (Merriam, 2002:8).

A case study entails the investigation of a single unit with multiple variables (Babbie *et al.*, 2001:281). In this case, the different teachers served as the units (therefore multiple case studies), and their learners as well as the different aspects of the lessons were the variables. The sample consisted of four units (teachers from different schools), with an average of five learners each. Two of the units consisted of five learners, one of four learners, and one of six learners. The particular situation in this case is the individual instrumental teaching-learning setting, which is rich with information about the interactions between teacher and learner, the ways in which music teaching-learning are taking place, and how the learners perceive their learning, lessons and teachers. A case study can "test" as well as "build" a theory (Merriam, 1985:206). The current study was testing theories; therefore, it is classified as deductive.

Case studies, however, have some problem factors and weaknesses. According to Baxter and Jack (2008:546), a general risk of a case study is that a researcher may attempt to answer a question that is too broad, or that the topic may have "too many objectives". In this study, although the research question has been pre-determined, the data from the case study is so rich, that it may unlock more questions, some of which are less relevant to the topic. These observations are worthy of study, but were not included in the analysis for discussion; merely mentioned as possibilities for future studies. An issue in reporting a case is in finding the right balance between "description" and "analysis"; should the reader interpret the description, or should the researcher analyse the findings? (Merriam, 1985:209). In the current study, findings were analysed, with the thorough descriptions being mostly part of the appendices, and not the main content. This is due to the fact that the research question can be best addressed through a proper analysis of the data with certain parameters in mind. Some of case studies' weaknesses have been identified as a lack of scientific accuracy and reliability, and that it is not necessarily generalizable (Noor, 2008:1603). It however can provide a "holistic" view of a situation, and when using multiple case studies, generalisations can more easily be allowed (*Ibid.*). In qualitative studies however, the "internal" generalizability is more important than "external" (Onwuegbuzie & Johnson, 2006:49, 50). The current study uses multiple case studies, which thus

strengthens the ability to generalize findings internally; thus, amongst and within the cases. The issue of a lack of scientific accuracy does not fully apply to this study, as this study attempts to address a research question with the help of insights from multiple case studies, and not to make claims about all instrumental lessons based only on those cases.

3.4 Pilot study

A pilot study was conducted before the real and final data collection process commenced. This was done in order to determine the best procedures of collecting data to gain the most insightful and authentic results. After determining this, the final data collection procedures were modified accordingly. The insights gained through the pilot study were that the questionnaire should be shortened and simplified, that completion thereof should occur under the researcher's supervision, and that teacher participants should be selected according to their willingness to cooperate. Appendix 4 provides a thorough account of the pilot study..

3.5 Research methodology

This section refers to the final data collection process. As mentioned under *Research approac*h, a mixed methods approach was followed in this study. Different teachers' lessons were observed, and their pupils completed questionnaires. As discussed, a pilot study was conducted before the final data collection process commenced. The final data collection included lessons from four different teachers across four different schools in the suburbs of Cape Town. The process, including the researcher, participants, and tools will be discussed thoroughly below.

3.5.1 Role of researcher

The role of the researcher was a non-participating observer during the course of the lessons. The researcher was also in charge of the video camera, making sure that a satisfactorily image of the process was captured. Although image was not prioritised in the pilot study, the researcher realised that one can gain more visual and non-verbal information through getting a proper enough image.

The researcher had a slightly more active role during questionnaire completion. To avoid the same issues as in the pilot study, like more than one answer to a multiple-choice question, in the final data collection round the researcher communicated a few guidelines to the participating learners prior to questionnaire completion:

- Answer only according to the instrument that was observed, and to that specific teacher (some learners play more than one instrument with different teachers)
- Try to answer all questions. The last section's comments are optional.
- Choose only one answer to every question.
- Ask the researcher for help if you do not understand a question.

The researcher was available to answer questions for the whole duration of the questionnaire completion. In two cases (at two different schools), the researcher had to sit down with one child individually and talk them through each question and make sure that they understand it. One case was a Korean boy, who did not understand all the English. The other case was a nine-year old girl, who, due to her age, required extra help to ensure all questions were understood.

3.5.2 Description of participants

The researcher contacted primary school music teachers who she knows through music studies and courses. They were chosen according to their interest in and support of research in music education. In the pilot study, the researcher found that some teachers did not understand the process of data collection for a Master's study, and thus did not fully support the process in order to get the most useful results. Therefore, in the final data collection, participants were not only selected more carefully, but had to be willing to fully cooperate to participate. This included:

- to recruit at least five of their learners.
- to provide the learners and their parents with consent and assent forms, and to ensure that it is returned and signed before learners may participate.
- to ask the headmaster for permission, and to ensure that he/she signs the consent form.
- to allocate a time when learners can complete the questionnaire under the researcher's supervision.

After conducting the pilot study, the researcher concluded that the questionnaire is too demanding for grade-three learners. Therefore, grade-three learners were not included in the final data collection. There was, however, one instance where a teacher misunderstood the researcher's instructions, and included a grade-three learner. The researcher aided this learner through the questionnaire to make sure that no questions were misunderstood.

Although the researcher stated in the research proposal and final REC application that five teachers with five learners each will be recruited, the final number was four teachers. One teacher had six

learners who participated, and one teacher had a learner who withdrew a day before the observation, due to shyness for the camera; it left the teacher with four learners to participate.

The data collection time-frame can be summarised in the following way:

School 1 – Teacher Anne

- Five learners
- Two visits
- Questionnaire on second visit during break (30 min.)

School 2 – Teacher Beth

- Six learners
- Two visits
- Questionnaire completion on second visit in music theory slot.

School 3 – Teacher Chris

- Four learners
- One visit
- Questionnaire completion individually after each learner's lesson; lessons were cut short to be able to do it under supervision
- One learner was in grade 3, as the teacher did not understand all the criteria. The researcher went through the questionnaire with that learner and talked through all the questions.

School 4 – Teacher Dea

- Five learners
- Three visits
- One duet lesson accidently
- Questionnaire completion for L1 occurred individually after his lesson, as he required help from the researcher with English – each question was read and explained to him.
- Three learners completed it together on third visit from the researcher.
- L5 completed it individually after his lesson.

3.5.3 Data collection tools

The data collection tools consisted of learner questionnaires, and tools used for video recordings.

Observations

A video camera with a tripod (to ensure minimal movement of the camera) was used for the recordings. In the final data collection, the researcher aimed to get a thorough image, where the learner and the teacher could be seen in order to include things like body language and technique on the instrument in the analysis. The researcher aimed to leave as much space as possible between the camera and the learner (and teacher) to make them feel as comfortable as possible. The researcher did not want the participants to be too aware of the presence of the camera and observer. At times, some of the teachers walked away from the camera's view to give the learners space, or to fetch their instruments or music books etc. At those moments, only the learner can be seen in the video. Transcriptions of all videos can be seen in Appendix 5.1, 5.2, 5.3, and 5.4.

Questionnaires

Standardised SDT questionnaires were completed by all the learners who were observed. Three different questionnaires were taken and adapted according to an individual instrumental setting: the *Basic Psychological Needs Scales (BPNS)* (addressing fulfilment of the basic psychological needs), the *Self-Regulation Questionnaire (SRQ)* (addressing OIT), and the *Intrinsic Motivation Inventory (IMI)* (addressing intrinsic motivation). The standardised IMI and BPNS contains a seven-item scale, and each question has to be rated according to it. The SRQ, however, has a version which is more suitable for children, as it contains a four-item scale, and the most applicable answer has to be circled by the participant, instead of written in. For the purposes of the study, this format was adapted throughout the questionnaires. A fourth questionnaire, a qualitative one designed by the researcher, was also added. This questionnaire was aimed at learners' self-reported enjoyment of the different aspects of their instrumental learning.

More specifically, each questionnaire was chosen for the following reasons:

- BPNS examines the three basic psychological needs' fulfilment, which is fundamental for the support of any mini-theory.

- SRQ examines OIT, and was chosen to measure the learners' different levels of extrinsic motivation against the continuum of internalisation. This was deemed important in SDT support, as learners have to internalise the less intrinsically motivated aspects of instrumental learning. They have to regulate their own learning process if they are to enjoy music lifelong.

- IMI was selected, as many learners probably have a certain amount of intrinsic motivation to pursue the instrument that they are learning. It is thus important that the learning conditions

do not undermine this intrinsic motivation, which may be seen as the basis of musical enjoyment.

Questions were grouped according to topics relevant to individual instrumental learning. Suitable pictures were selected for each topic to make the questionnaires child friendly. Some questions were expanded according to different aspects of instrumental learning, for example in the *SRQ*, the question aimed at external regulation (getting into trouble) was divided into two questions: "…in trouble with my teacher…" and "…in trouble with my parents…".

After the pilot study and the REC requests for changes, it was concluded by the researcher that the original questionnaire was too long. It was therefore shortened substantially by removing all the reversed questions – a concept used in the standardised SDT questionnaires to ensure validity. The options of answers to choose from changed from Very true, Sort of true, Not very true, Not at all true to Always, Most of the time, Sometimes, Never, in order to be more child friendly. Changes also included that many of the Afrikaans words that learners found difficulty with were replaced with simpler synonyms, or if not possible, explained in brackets. Pictures of animals suited to all themes covered – playing instruments, lessons, teacher, practising, trying hard, playing in front of people – were added whenever that theme recurred. Although the original questionnaire had pictures, some could be interpreted as gender stereotypes (e.g. a girl practising her instrument). Therefore, they were replaced with animal pictures. The layout was adapted so that the first page is just a cover page, and the questions only start at the back. That way, when the questionnaires were submitted to the researcher, one could only see the cover page, and learners' answers could not be exposed to their teacher or peers. The full questionnaire can be seen in Appendix 3.1.

3.6 Data analysis

Pupils were grouped according to their teachers, causing each specific teacher to be a case study.

3.6.1 Observation protocol

The video recordings examined the interactions between pupil and teacher, as well as the methods of music teaching that is employed. The assessment of SDT support was determined by perceivable support from the teacher of specific criteria for the relevant mini-theories. If the learner is offered choices, one may say that the teacher supports autonomy. No acknowledgement from the teacher of when the learner has done something right, or constant reprimanding, may indicate that the learner has a lack of competence support and perhaps a lack of relatedness.

The teaching of musical understanding was observed by applying parameters for how well teachers support the different types of thinking and knowing within musical understanding. Teaching a specific musical practice appropriately would for instance indicate situated musical thinking and knowing. The specific method employed to analyse the videos was constant comparison analysis (also referred to as 'coding'), and it was undertaken deductively and inductively; thus, codes were "identified prior to analysis", but some codes also emerged from the data (Leech & Onwuegbuzie, 2007:565). This method is useful when a researcher wants to identify "underlying themes" in the data (*Ibid.*:565), or wants to answer "general" or "overarching" questions (*Ibid.*:576). For the video recordings to be in a suitable format for this process, they were transcribed by the researcher, merely describing the events in the video. The researcher coded chunks in the text according to a set of codes identified prior to the study, and in some cases according to new codes emerging. These were ordered according to themes containing 'subthemes'.

From the literature in chapter two, the themes, subthemes and codes for analysis of the qualitative data were derived. The qualitative data includes videos of lesson observations, textual transcriptions thereof, and the qualitative section of the questionnaire, where learners could write their own comments. Codes were selected or adapted according to how observable it would be in a lesson, or readable in learners' written comments. Under the subtheme introjection (under theme OIT) for instance, one cannot observe in a lesson whether a learner punishes themselves internally (code), but it may be read into a sentence that they write in their comments. In the coding framework (Appendix 2), a code that is indicative of support for something (subthemes), will sometimes have a total opposite. However, in most cases, it is not always possible to have total opposites, therefore, a few opposites are given in such cases, some of which also belong to other positive codes. It is also represented like that in the coding framework table. In many cases, it may seem as though codes are mostly aimed towards teachers' behaviour, but this is only due to the fact that some of the codes will manifest more in the teachers' behaviour towards a learner, than directly in the learner. In cases where it can manifest in the learner, a code is given to provide for it.

3.6.2 Questionnaires

The learners' names were written on their questionnaires, for analysis purposes only, as it enabled the researcher to match the questionnaires with the video recordings. The learners' self-reported perception of their teachers' SDT support confirmed some of the findings in the video recordings, illuminated perceptions which could not be observed in a lesson, and gave insight into the thoughts of the quieter learners. The questionnaires had a quantitative and qualitative section, which were analysed in the following ways:

Quantitative section

The questionnaires were analysed through the standardised methods of calculating the scores of the different sections. The learners' answers were imported into a Microsoft Excel spreadsheet. The program calculated each learner's score on each subscale of each qualitative questionnaire. The ANOVA (**AN**alysis **O**f **VA**riance) method was employed for analysis of the data. Each subscale of the questionnaire was displayed in a boxplot, which consisted of all teachers (units) with all their learners. There were also boxplots of all subscales, showing each teachers' results as a whole. The ANOVA model shows the variance between answers – how consistently a teacher's learners scored on every subscale. One can see how widely learners' answers varied; thus, whether or not general conclusions can be drawn across a specific teacher's learners, or whether each learner should be discussed separately. One can also see how consistently the specific learners answered each question, telling one how valid that learner's answers are to draw general conclusions. How the questions are constructed, can be seen in Appendix 3.2. All the ANOVA boxplots and tables can be seen on a CD (Appendix 8).

Qualitative section

The enjoyment questionnaire was imported into Microsoft Word documents (Appendix 6.1, 6.2, 6.3 and 6.4) – one for each case (the different teachers with their group of learners). The results of these questionnaires were also coded according to the coding framework (Appendix 2). It supported, expanded, explained, or showed alternative explanations for the findings from the observations and quantitative data.

3.6.3 ATLAS.ti

ATLAS.ti is a qualitative data analysis software program. It can deal with large amounts of textual, graphical, audio and video data (ATLAS.ti, 2017). In this study, it was used to analyse textual data – transcriptions of video recordings, and written comments by learners – by means of coding. In ATLAS.ti, codes are dragged into the selected piece of data (*Ibid.*). In the current study, codes have been predetermined by the researcher, and were assigned to sentences, words, or paragraphs to which it applied. Visual representations of the codes themselves, and their relations to other codes, were created, and exported to the research report (chapter 4). Columns were also created and exported, showing how often codes or subthemes occurred within the documents of every teacher, and the totals of all the teachers. The analysis in ATLAS.ti can be seen on a CD (Appendix 7).

In conclusion, a general assessment of each teacher's style was made in the form of a summary of the teachers' different pupils (their lessons and their questionnaires). A teacher is described as generally being SDT supportive (or not very SDT supportive), generally succeeding in cultivating musical

understanding (or not), and whether his/her pupils generally enjoy their instrumental training because of these two aspects.

3.7 Ethical considerations

When undertaking a study where humans, especially minors are the participants, certain ethical considerations are important. Before any data collection for the final product could commence, the study had to be approved by DESC (Departmental Ethics Screening Committee), who referred it to REC, as it qualified as a medium to high risk study. The reason being that it included children younger than 18. The REC application, with proposal number SU-HSD-002568, was approved on 24 October 2016 (see Appendix 1.1).

Ethical aspects that had to be in place included protection of participants' privacy, which includes the protection of data, institutional permissions (Appendix 1.2), teacher participant consent (Appendix 1.3), parental consent (Appendix 1.4), and permission from the participants (Appendix 1.5). All participants' anonymity is protected in this study. No names of participants or institutions are used. Teachers are referred to by means of pseudonyms: Teachers A, B, C, D became Anne, Beth, Chris, Dea. Learners are referred to as L1 etc., and it is the same for the learners of all four teachers.

No information regarding learners or their teachers was revealed to the learners' parents. As the questionnaire involves questions about the learners' feelings about their music teacher and parents, the teachers did not have insight in the completed questionnaires. Answers from learners may be more reliable if they feel that the information is confidential.

3.8 Reliability and validity

The reliability and validity of data is an important consideration, especially in a mixed method approach with a case study research design. Analysing different data sets can be done by triangulation: moving between the data sets and gaining knowledge from them, then bringing it together to supplement each other; thus, gaining a multi-dimensional perspective to address a research question (Feilzer, 2010:12). According to Yin (2013), when a case study's different methods are designed to collect "overlapping data", triangulation is possible, and the converging findings may increase the "validity". However, Richardson and St. Pierre (2008:478) propose that the image for validity should not be the triangle (as in triangulation), because of its two-dimensionality, but rather the crystal (crystallisation), a multi-dimensional shape with many angles. The process employed in this study may be seen as crystallisation. According to Denzin and Lincoln (2008:7), through the crystallisation process, the writer tells the same story from different

perspectives. The process of crystallisation "combines multiple forms of analysis" into a "coherent text", which also admits its partiality and researcher biases (Ellingson, 2011:4). It can provide "deep, thickly described" interpretations about the occurrence or group studied, and it may include more than one genre/medium, like a narrative, report, or video (*Ibid.*:10). The current study fits the description, as different data sets were analysed differently, but were combined again to form a thorough description of the cases. It included videos, reports, and transcribed texts from the videos, which takes on the form of a dialogue between teacher and learner. Furthermore, Ellingson (2011:14, 15) divides crystallisation into integrated or dendritic: integrated crystallisation presents the multiple genres or texts into one "coherent" depiction, like a book, which can be "woven" (the different genres are blended), or "patched" (the different genres are juxtaposed to each other). Dendritic does not combine the different texts or genres into a "single text" (Ellingson, 2011:14, 15). The current study follows integrated, woven crystallisation, as the different texts derived from the different methods of collection, were combined into a single report. The separate texts from which it was derived, are presented as appendices.

There are other measures that can be taken to improve chances of validity and reliability in a study. Quantitative data is seen as having a reliability advantage above qualitative data. Standardised questionnaires, large samples, and the distance between the researcher and the participants strengthen the validity (Lewis, 2009:8). The quantitative aspect of the current study used standardised questionnaires, and there was a considerable distance between the researcher and the learners, as they were not the researcher's own learners. The sample was however not large (four teachers; five learners each), which should not have impacted the reliability significantly, as learners are grouped according to their teachers, and being treated as units within a multiple case study. In this study, the mixed method approach may thus be seen as strengthening the reliability, as qualitative findings can be backed by the quantitative data. Furthermore, this mixed method research has an "integrated design" (as opposed to segregated), as both the qualitative and quantitative data attempt to answer the same research question, and is synthesised after being analysed (Sandelowski *et al.*, 2006:34).

In qualitative data collection, certain measures can be taken too to ensure optimal validity. The procedures of collecting and analysing data should preferably be derived from that which has been successfully applied in previous similar studies (Shenton, 2004:64). Observations, being video recorded (as in the current study) is a viable procedure for collecting qualitative data, and employing coding for the analysis has been done in many qualitative studies. Within this general guideline, specific measures should also be taken to strengthen validity. The researcher must, for example, make sure that participants' words are directly reported, and not a shortened version transcribed by the researcher (Lewis, 2009:9). Video recordings are a way of validating "descriptive data", although the researcher still has to make sure that a thorough description of the environment is given (*Ibid.*). In the

current study, the video recordings are thus contributing towards the validity of events described. The video recordings, as opposed to just audio recordings, helped capturing the environment and setting, instead of just words and sounds. Another threat to validity can be the researcher's interpretation, which should be avoided by asking open-ended questions in the case of interviews (Lewis, 2009:10). In the current study however, events were recorded as they occurred naturally, without any imposition from the researcher. The researcher first transcribed events just as they were, before attempting to interpret them.

Central to the analysis of data, is the theory being used. It is important not to "force" the data into the theory that is used, and that discrepant data be acknowledged and reported, even if it cannot be accounted for by the theory (Lewis, 2009:10). According to Yin (2013:327), findings in a case study may also be connected to the theory by explaining the shortcomings in the literature. In the current study, the quantitative section is less problematic in this sense, as the questionnaires are standardized, and therefore based on a specific theory (SDT), and designed to yield outcomes specific to that theory. The qualitative side is, however, open to outcomes outside of the theories employed. These outcomes were acknowledged, but not discussed or interpreted in-depth; rather opened up for further investigation. The process of crystallisation recognises that one's knowledge of a topic is never complete, but still provides an insightful account (Ellingson, 2011:12).

Researchers likely possess bias of some sort, which should be reported (Lewis, 2009:10). A significant cause for bias in this study could be the researcher's knowledge of some of the instruments that were observed. This could cause the researcher to be more critical towards lessons of these instruments that are familiar to the researcher. The researcher also knew all the teachers personally before commencement of the study, which could cause interpretations of events based on prior knowledge of the person. This familiarity is not necessarily a disadvantage, as Shenton (2004:65) states the early acquaintance with the participant "culture" as a strengthening factor for credibility of findings. In the current study, the familiarity between researcher and teachers could possibly put them more at ease during the lesson observations. The possible bias it could cause was overcome by viewing each lesson as an event occurring at a specific time, and only judged according to what happened at that specific time, backed up only by the written accounts (SDT and enjoyment) from the learners. Participating learners were not personally selected by the researcher, which partially supports the credibility measure of selecting a sample randomly, which may reduce possible researcher biases (Shenton, 2004:65). The learners were recruited by their teachers according to criteria given by the researcher, and those who fitted the criteria's partaking depended on their and their parents' willingness to participate.

A researcher must also be aware of the effect that his/her presence has on the participants; a term called "reactivity" (Lewis, 2009:10). In the current study, this effect could be seen as minimal, as data was collected by means of observations, and not interviews or any other form of participation by the researcher. Within specific video recordings, there are also some clues regarding the impact of the researcher's presence. It can be seen in how often participants look into the camera, or talk directly to the researcher. All of these clues were included in the transcription of the recordings, and could thus provide possible explanations for some discrepancies between the learners' written accounts, and what was seen in the observation.

3.9 Limitations

The shortcomings of the study can be summarised as follows:

- The study only examined pupils between the ages of nine and 13, because they had to be old enough to answer a questionnaire reliably. There are thus no perspectives from younger pupils.
- Only one lesson per learner was observed, which could possibly mean that they did not have enough time to get used to a visitor and video camera. It could also mean that only a partial account of lesson occurrences is given, as all activities that take place in lessons could perhaps not be covered in one 30-minute lesson.
- This study will not be carried out in the long term, thus although predictions can be made of whether these children will continue their instrumental tuition, there is no way to prove that those predictions are correct.
- The study does not account for other possible factors than lack of SDT support and musical understanding, which may lead to diminished musical enjoyment. Examples may include circumstances at home, learning an instrument which is not the ideal one for that pupil. Although some of these may link with SDT, none of the questions are aimed directly at those other factors.

This chapter showed how the research was conducted. The philosophy, approach, design, methods, and analysis were named and discussed in-depth. The chosen mixed methods approach was qualified through the possibility that crystallisation of data can take place effectively through different sources of data. Other issues included ethical considerations, and how through a pilot study, the researcher could identify and minimise sources of error in the final data collection.

Chapter 4 : Data presentation and discussion

This chapter presents and discusses the analysis of data. It is discussed under headings according to themes, and subheadings for the subthemes; their positive and negative sides, when applicable. For every subtheme of SDT, an ANOVA boxplot with all four teachers' results are presented, showing how they supported it in general. If any teacher showed interesting deviations from the general findings, their ANOVA boxplots are presented and discussed.

4.1 Basic psychological needs

Support for the basic psychological needs is important, as teachers need to attend to this to promote learners' well-being. It also needs to be in place for intrinsic motivation to be maintained and for extrinsic motivation to become more internalised. The results of satisfaction across the four teachers for each need are shown in an ANOVA table. Thereafter the positive and negative aspects are discussed and presented in greater depth. It is presented in the following order: competence, relatedness and autonomy.

4.1.1 Competence

Competence satisfaction across all four teachers can be seen in Figure 4-1. It represents the quantitative data that were derived from the questionnaires.
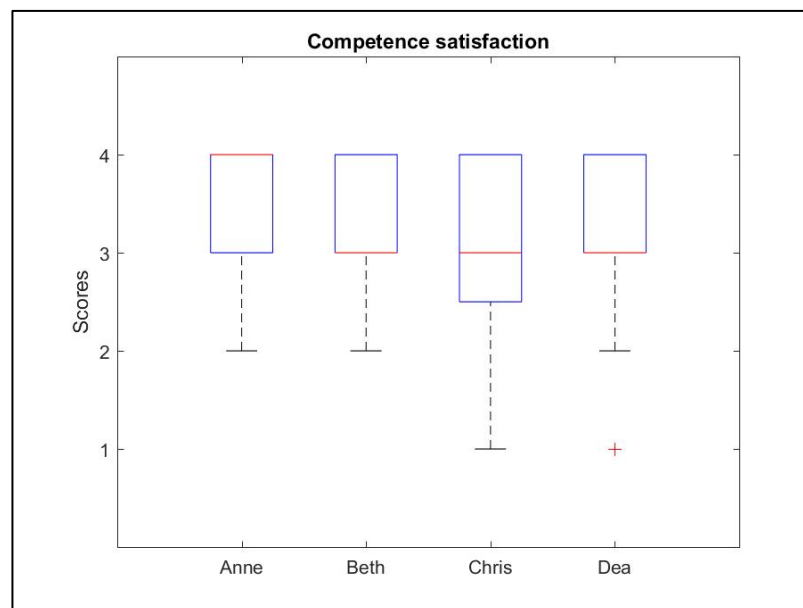
Figure 4-1_Competence

All four teachers got high average scores (above 50%) on competence satisfaction. Anne scored the highest average on competence satisfaction, which indicates that her learners generally feel that their need for competence is supported.

4.1.1.1 Competence positive

Figure 4-2 shows the codes for competence positive; thus, descriptions of how competence can be supported. It also shows the relations between codes. The main codes were pre-determined from the literature, and some developed from existing codes to fit unique situations.

Figure 4-2_Codes_Competence positive

Table 4-1 shows how many instances occurred for every code under competence positive – both per teacher and in total. Throughout the discussion, some examples of the occurrences in the tables will be presented and discussed.

Table 4-1_Codes_Occurrence _Competence positive

Competence positive		Anne	Beth	Chris	Dea	Totals
Achieving a goal		1	0	1	0	2
Acknowledges improvement		3	7	1	11	22
Emphasises effort		3	2	4	5	14
Encourages growth		1	1	1	0	3
Learner feels they are doing well		1	2	1	3	7
Learner feels they are getting something right		4	5	3	1	13
Learner feels they are improving		4	2	1	0	7
Manageable and/or optimal challenges		2	3	1	0	6
Measures ability and progress to learner's own previous achievement		0	0	0	0	0
Positive feedback		10	11	17	64	102
Praises efforts		1	4	9	14	28
Reassuring gestures		0	10	0	0	10
Reassuring language		3	20	11	12	46
Sets goals according to learner's current ability		0	0	0	0	0
Systematic approach		23	22	3	54	102
Teacher is encouraging		0	8	5	3	16
Teacher provides clear instructions		4	13	3	12	32
Teacher sets reasonable goals		2	7	1	6	16
Teaches mindful practice strategies		5	0	1	0	6
Totals		67	117	63	185	432

Achieving a goal was a code that emerged from the qualitative questionnaire from the learners. Figure 4-3 shows how it applied to a comment by L5 of Anne (2:48), about the question of what she enjoys most about her lessons. One could interpret "being rewarded" as external regulation, or as rewards referring to internal rewards, which would indicate introjected regulation. L5 could, however, also mean that the feeling of competence feels like a reward or is rewarding in itself. From that comment alone it is not possible to tell. L5 however explains it with "I want to work towards something", which seems to refer to goal setting and achieving, which should contribute towards competence. This may clarify that the reward the learner mentioned, refers to achieving a goal that she was working towards.

Figure 4-3_Anne_Achieving a goal

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Acknowledges improvement is a subdivision of *positive feedback*, as improvement can also lead to feelings of competence, and teachers can support this by making students aware of their improvement. This can most often be seen by use of the word 'better' or 'much better'. It could also be seen in a comment by Chris (5:95): "the shifting is coming on nicely; it's growing". Dea (7:141) pointed out that L2's timing has improved a lot, to L4 (7:393) she said she can hear that she has worked on something, and that a piece made "lovely progress" (7:405), and to L5 she said an attempt he made was "much more fluent" (7:419). Anne acknowledged improvement (1:73) in a non-verbal way, by clapping hands (Figure 4-4). This was after L2 alerted her to the fact that she never got a certain spot in the music right before that moment in the lesson. It is also an example of how a teacher can praise a learner's efforts.

Emphasises effort manifests in the way that teachers stress that success is related to hard work, and not fixed ability. From the qualitative questionnaire, it became clear that many of the learners also have this view. When L5 of Beth (3:298) complained about something being hard, Beth commented that the more she practises it, the easier it will get. Figure 4-5 shows that L2 of Anne (2:5) also believes that getting something right is related to the effort she puts in.
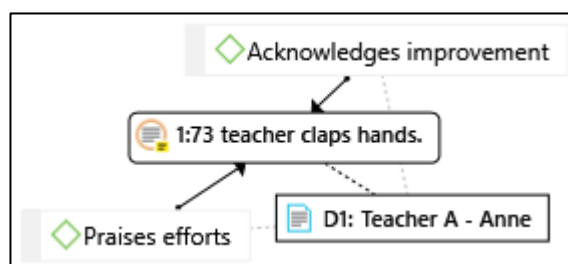
Figure 4-4_Anne claps hands

Encourages growth was meant as an opposite to competence thwarting code, *Focuses on outcomes*. The following extract of L5 is an example of how Anne encourages growth (1:255): "Okay skattie, good." She says that at this rate the learner will be bored by the end of the first term, but she wants her to play her pieces really beautifully. This extract indicates that Anne does not only want L5 to learn a few exam pieces and know them, but to take the most out of the experience. Beth (3:276) supported this in L4, when L4 made a comment about having learnt about a fermata for the exam, which wasn't asked, and Beth said to her but now she will remember it forever. The following extract from Chris (5:95) during L2's lesson is also an example: "the shifting is coming on nicely; it's growing. We just need to work on that it's more smoother, and I must ask you one day, ah, did you really shift now? I didn't hear that." This instance indicates that Chris views shifting as a skill that is necessary for violin playing that will keep growing and developing over time, and not just something that L2 must quickly master for an upcoming exam.

Learner feels they are doing well was mostly seen in the qualitative questionnaire, and is represented by all four teachers' learners. Figure 4-6 shows an example of L2 of Anne. L2 gave these comments on what she enjoys most about playing her instrument. *Learner feels they are improving* was also assigned, and is part of the latter. She also feels that she is getting something right. It is clear that practising serves the purpose of feeling competent for L2, as those feelings result from getting something right after lots of practice. As discussed earlier, the learner realises that success and growth are related to hard work, and not fixed ability; therefore, *Emphasises effort* was assigned. Finally, these comments indicate that L2 is faced with optimal challenges, as she has to practise a lot to get it right. The fact that the challenges are manageable, but optimal contributes towards competence. Dea's L1 (8:60) and L4 (8:63) similarly made comments about playing well as things they enjoy most about practising. There were also two instances of *Learner feels they are doing well* in the lesson observations. One example was Beth's L5 (3:346): While playing, she said "jo ek speel goed", and smiled. After successful completion of a duet lesson, Dea's L3 (7:289) gave a 'high five' to her friend who played with her.

Learner feels they are getting something right in many cases was associated with practising, as shown in Figure 4-5. It was also assigned to comments of what learners enjoy the most about their lessons and instrumental playing. In the lessons, getting something right, seems to be associated with the help and input that learners receive from their teachers. Similarly, *Learner feels they are improving* was associated with what learners enjoy most about practising in three examples out of seven. One example is the following comment by L4 of Anne (2:92): "The things I enjoy most about practising is that I get better." L4 acknowledges improvement as a positive outcome of practising, which leads to enjoyment thereof.
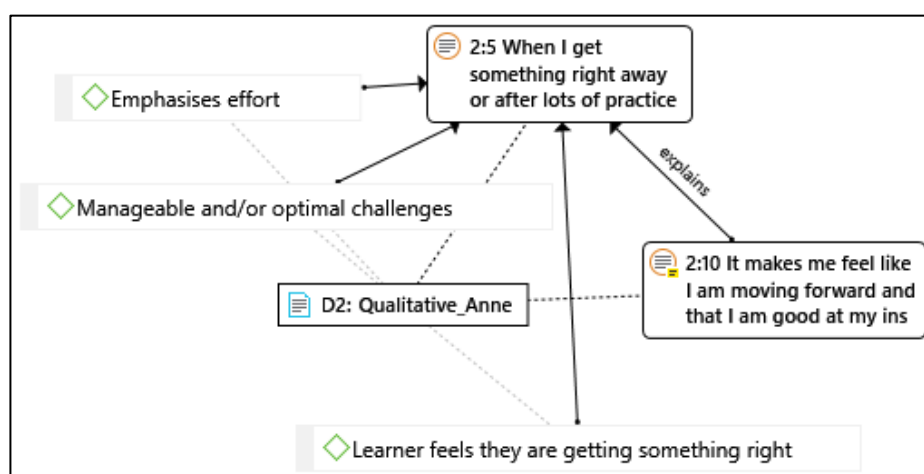
Figure 4-5_Anne_Getting something right
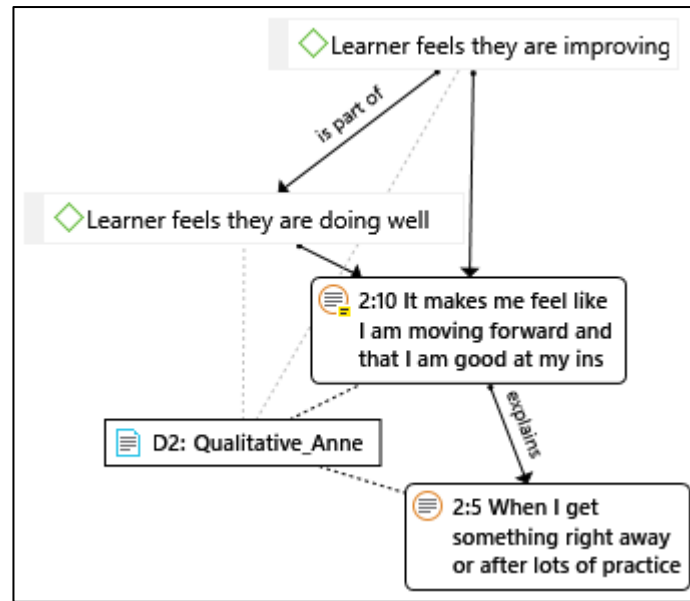
Figure 4-6_Anne_Moving forward

Manageable and/or optimal challenges supports competence, because a challenge needs to be manageable to be overcome and to lead to feelings of competence, and it needs to be optimal in order to be challenging; doing something that feels too easy may also lead to feelings of incompetence, because there is no feeling of mastering something. By using the words "almost challenging", L3's comment (Figure 4-7) illustrates the importance of a challenge being manageable to be enjoyable. This is also a point of convergence between Flow theory and SDT – feelings of competence will result from being in a state of Flow, and Flow takes place when a manageable challenge is present. In turn it also has a positive effect on intrinsic motivation (also discussed under heading, CET).
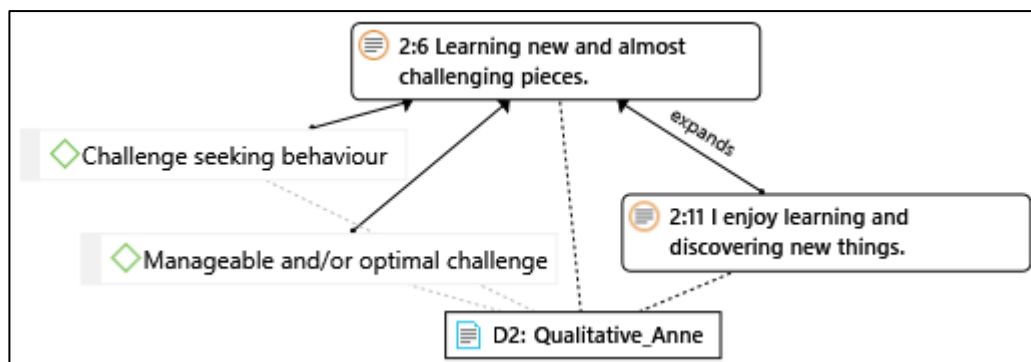
Figure 4-7_Anne_Learning new things

As shown in Figure 4-8, Chris (5:165) gave L4 an optimal challenge in one of her previous lessons to prepare for the lesson in the observation. L4 was a nine-year-old girl at that stage who was still busy with initial in violin as Chris pointed out, but he gave her a grade 1 piece, as he presumably saw the potential in her to take on a challenge. L4 looked overwhelmed and perhaps slightly scared (it could be partly due to the researcher's and camera's presence), but when she played the piece, it was clear

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that she was ready for the challenge, as she mastered it successfully. Chris made the correct judgement about a manageable and optimal challenge for L4, and the success that resulted from it presumably yielded positive outcomes for L4's feelings of competence.
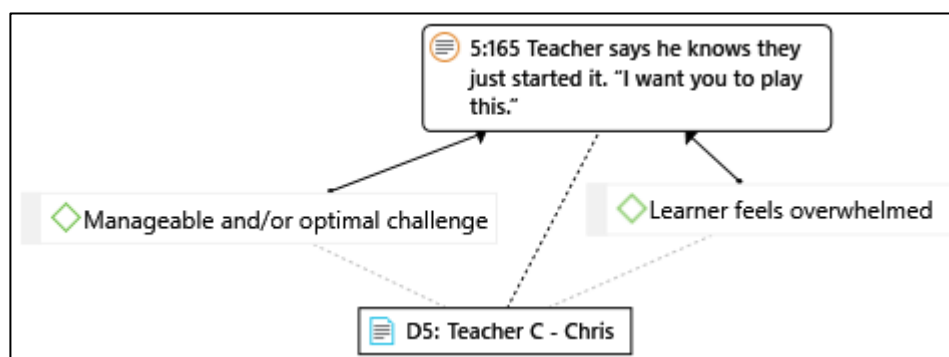
Figure 4-8_Chris_Challenge_Overwhelmed

Positive feedback is an important way in which teachers can support competence. It was supported very often, and all four teachers are thoroughly represented in this aspect. Teachers provided positive feedback fairly often, by saying "good", "that was nice", "*mooi*", "very nice", "well done", "that was great", or by specifically pointing out what was good in an attempt by a learner. Beth (3:443) said "so cute" and smiled widely after L6 played her piece well, thereby also providing positive feedback. Anne (1:132), in L3's lesson displayed a non-verbal way in which positive feedback may be provided by making a thumbs-up. Chris (5:51) also showed a non-verbal way, by giving L1 a 'high five'. When Dea's duet pair gave each other a 'high five', she joined (7:289) by doing the same with both. L4 of Anne (2:24) gives a comment which suggests another channel for positive feedback: "I don't like doing exams or tests even though at the end I know how good I am […]". Even though L4 finds exams and tests stressful, they seem to contribute positively to her feelings of competence, as they provide positive feedback. It shows that teachers should utilise formal evaluations as opportunities for positive feedback. Even though it is an opportunity to learn from one's current shortcomings, the positive aspects of the learner's playing should also be emphasised and celebrated to promote feelings of competence. This can be done by, for instance, the teacher and learner discussing the learner's exam report. If the teacher is the examiner, they can set the report up in such a way that positive feedback is clearly provided.

Praises efforts also occurred often, and was assigned when teachers specifically used words that indicated praise. It often co-occurred with positive feedback. This was not reserved for when learners performed perfectly, but whenever they extended effort that yielded success. One non-verbal example was already indicated in Figure 4-4. Another such example was when Chris (5:13) praised L1 when she successfully put her shoulder rest on her violin, even though it still needed some adjustment with Chris's help: "Oh, grand hey? Wow! Fantastic!" When L5 of Beth (3:343) made a good attempt with

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her piece: "Ja! Baie mooi!" Beth then said it is not perfect yet. She first praised L5's effort before saying that it can still improve, thereby making it clear that L5 is already doing something right.

Reassuring language and *Reassuring gestures* are perhaps more subtle ways to support competence, but contribute in the sense that it can make the learner feel less overwhelmed, or that they can do something. Examples of gestures came only from Beth's lessons, and include nodding that a learner can continue or is right, and making 'yes' sounds. Beth (3:233) also showed an example of both a gesture and language, when she threw her arms up dramatically, and said she did not see the problem. L4 was concerned about a spot in her piece that she thought she could not do right, and when she did, this was how Beth reassured her.

Examples of reassuring language came from all four teachers' lesson observations. An example is with Anne (1:115) in L3's lesson: when L3 was right but hesitant, Anne said "yes that's right it's right". This comment could give L3 more confidence in what she was doing, and convince her that she was doing something right. It also often occurs by use of the words "that's it", "*daar's hy*", "yes" and "*ja*", "don't worry", "it's fine", "that's right", "it's right", or pointing out to a learner why something is not as bad as they think, or that they should not feel scared to do something. Beth (3:184) said to L3 "nie so moeilik nie". When L4 complained that something was difficult, Beth (3:231) said that twice before she did it wrong she did it right. Beth (3:298) also said to L5 the more she practises something, the easier it will get. Chris (5:159) said "it will come right" to L4 when she was concerned about her pinkie slipping off her bow. Chris (5:16) with L1:

> He says that she will do the scale in a bowing exercise now; first normally and then staccato. He assures her that he knows she is not used to the staccato way yet, because it was the first time she learnt it last week, but that she is just going to show him.

Chris (5:49) with L1:

> Chris holds the bow over her hand and manipulates the movement on the scale notes. The sound is very scratched and under high pressure. When done, he says "did you hear that? Make an ugly sound." He says he wants her to develop that bite, and short short. "Ugly sounds will come first."
> L1 laughs.
> Chris: "Ugly sounds come first before the nice sounds come. Okay? Get used to that." He laughs. "Right, you can't have everything perfect."

Following a *Systematic approach* is a way of supporting competence, because not doing so may result in learners feeling overwhelmed by a challenge, struggling extensively, and thus not feeling competent. It is clear that all four teachers often follow a systematic approach. This was done through letting a learner play one hand at a time on the keyboard to correct problems, telling a learner to focus only on the problem areas when practising at home (as she is at a point where she knows her music fairly well), letting learners start from a certain point in their piece to work on a specific problem or

aspect, letting a learner play slowly when still learning, focusing on not too many phrases at a time in the lesson to work on all the details, specifying from where to where a learner should play now, and letting learners play alone first before adding accompaniments or duet parts. There was an example where Anne's (1:60) L2 followed a systematic approach. This instance happened when someone interrupted the lesson and demanded Anne's attention. Anne said to L2 that she should practise in the meanwhile. L2 applied a systematic approach to her practising, as she focused on a small part instead of struggling mindlessly through a big chunk. When Anne was finished, the learner played that passage correctly. One may speculate that L2 learned to work systematically because of Anne's example in the lessons. Other examples where learners follow a systematic approach by themselves include violin learners testing their starting notes before starting to play. Beth (3:49) helped L1 with finding her correct notes on the violin in a different position by letting her listen to them first in a well-known position so she could hear how it sounded. Beth (3:66) also let L1 play all her notes on a string step-wise up to the one she had to find, so that she could hear the interval of a tone between A and B that she made too big just before. The following example is also by Beth (3:25) with L1 during a violin lesson:

> L1 talks about the shift being so far. Beth says it will help if she finds a way to shift. She lets L1 do the shifting part of the scale again, including the notes going up to it from the A string. When L1 shifts, Beth physically corrects her thumb, so that it is with the rest of the fingers. Teacher says when you shift, you don't lift up your whole finger and move your whole hand.

With piano learners, Beth (3:107) talks about the fingers of a scale before letting L2 start. Beth (3:311) let L5 do a piano finger exercise on the closed piano lid before doing it on the keys. Chris (5:48) let L1 practise a new staccato technique on the violin on short down bows first before applying it to the scale again. Chris (5:69) also approached a new piece with L1 by playing only the strong beats to practise the articulation and to leave out the other notes. Chris (5:121) also followed a systematic approach in helping L3 find where the semi-tones will fall in a scale on the violin, by letting her use the piano (which she previously played and knows):

> Learner starts playing and makes a mistake with whole tones in the wrong places.
> Teacher stops learner and asks if learner did scales on the piano.
> Learner says yes.
> Teacher asks learner to come and play G on the piano.
> Learner goes to the piano and starts playing; at first learner makes the same mistake as on the violin, but then corrects it immediately and plays the scale correctly.
> Teacher asks learner to show him where she took the half steps.
> Learner shows him.
> Teacher says yes, and wants to know where else.
> Learner shows him and plays the notes.
> Teacher explains that in the first example there is no black note in between, and thus it is half a step. He plays the scale note by note and announces full or half-steps. He asks, so what do we do on the violin when we take full or half steps.
> Learner says you use half the bow.

> Teacher asks half the bow? He says we are going to work on that now. He says we use half fingers; we put our fingers together.

Dea quite frequently let her learners clap a part before playing it, so that they could first master the rhythm. She (7:114) also encouraged L2 to prepare before he starts blowing a note on the saxophone. She (7:150) also worked systematically with L2 by letting him play fingers only without blowing, to master a place where the fingers have to move fast.

Teacher is encouraging is signified by instances where teachers tell learners that they can do something, they can/will get it right, that something is not so difficult or 'almost there/'nearly there'. Beth criticised L2 (3:166) because he did not play a piece far below his standard properly, but then she made an encouraging comment by telling him he can do better. Beth (3:316) encouraged L5 (who thought a technique on the piano was difficult) by telling her that she (Beth) practised that technique a lot and can therefore do it, and that she (learner) will also be able to if she practises it a lot. L2 of Dea (8:45) said "I love the way she encourages me" in his comment about what he likes most about his teacher. Chris (5:38) said to L1 "More bow, more sound, Jo'burg, here we come!". By this he meant that her sound must be so big that people should hear it in Johannesburg. Chris (5:82) told L2 to never give up in the following example:

> Chris said she must never give up. Teacher sings "never give up" and then "we are the champions". He asks learner "do you know that song? You want me to sing it." L2 says she only knows a little bit, and starts to sing it. They sing together, L2 says that's the song, and Chris makes dramatic moves going backward with his torso. He keeps singing and dances with L2, taking her free hand and turning around her like in a partner-dance. She is smiling.

Chris (5:157) said to L4 "but you just say, what did you say? "I can't do it" [in a high voice] [L4 giggles] but you can; okay [laughs], let's do it again". According to Chris, L4 previously said that she cannot play her scale fluently like she should, and he encouraged her by telling her that she can.

When a *Teacher provides clear instructions,* a learner may have a better idea of what to do or how to do it, which decreases the chance of failing at a task during the lesson, and may thus lead to feelings of competence because of getting something right. Anne (1:183) provides an example with L5: "So you're playing exactly the same notes that you played; the first five notes you repeat at the top." Anne gave these instructions when L5 had to play a scale up to the 12th on the recorder for the first time; something that L5 already felt uncertain about. If she did not have clear instructions of how to do it before starting, L5 might have felt overwhelmed, that she can't get it right, and therefore incompetent. All four teachers provided clear instructions, and examples included instructions of how to do new scales and arpeggios with regards to fingering, bowing, octaves, how to do new exercises correctly, techniques, how to follow instructions on the music, how they will play something together, dynamics, and tempo.

If teachers *Set reasonable goals* for learners (as opposed to *Arbitrary goals*), competence can be supported. It is mostly seen when teachers set practising goals for their learners, like practising hands separately, focusing on a certain technique only, doing only a few new scales. Anne (1:158) encouraged L5 to take her piece at a higher speed than currently, but at one that is comfortable to her. Dea (7:407) set the goal of working towards an exam for L4, which they already started working on thoroughly.

Teaches mindful practise strategies can be seen when a teacher encourages slow practicing to "iron" mistakes "out", like when Anne (1:25) told L1 to practise slowly for this purpose. Anne (1:51) also showed a way that L2 can practise on the keyboard, by focusing on the left-right coordination, and doing it a few times over. Even though Anne did not explicitly say that this is how L2 should practise, she can apply this to her practicing at home. When a lesson got interrupted by the intercom, Anne (1:76) let L2 practise on her own for that while, thus being able to supervise how she practises. When Chris (5:49) encouraged L1 to make "ugly sounds", this could also be seen as a way to practise at home.

4.2.1.2 Competence negative

Figure 4-9 shows the codes and their relations for competence negative, thus descriptions of situations that are not in support of competence, and that should thus be avoided if possible, or managed. The main codes were pre-determined from the literature, and some developed from existing codes to fit unique situations. As shown in Table 4-2, examples where competence are impacted negatively are far outweighed by the positive examples. This is also supported by the ANOVA boxplot, which indicates that all four teachers scored high on competence satisfaction.
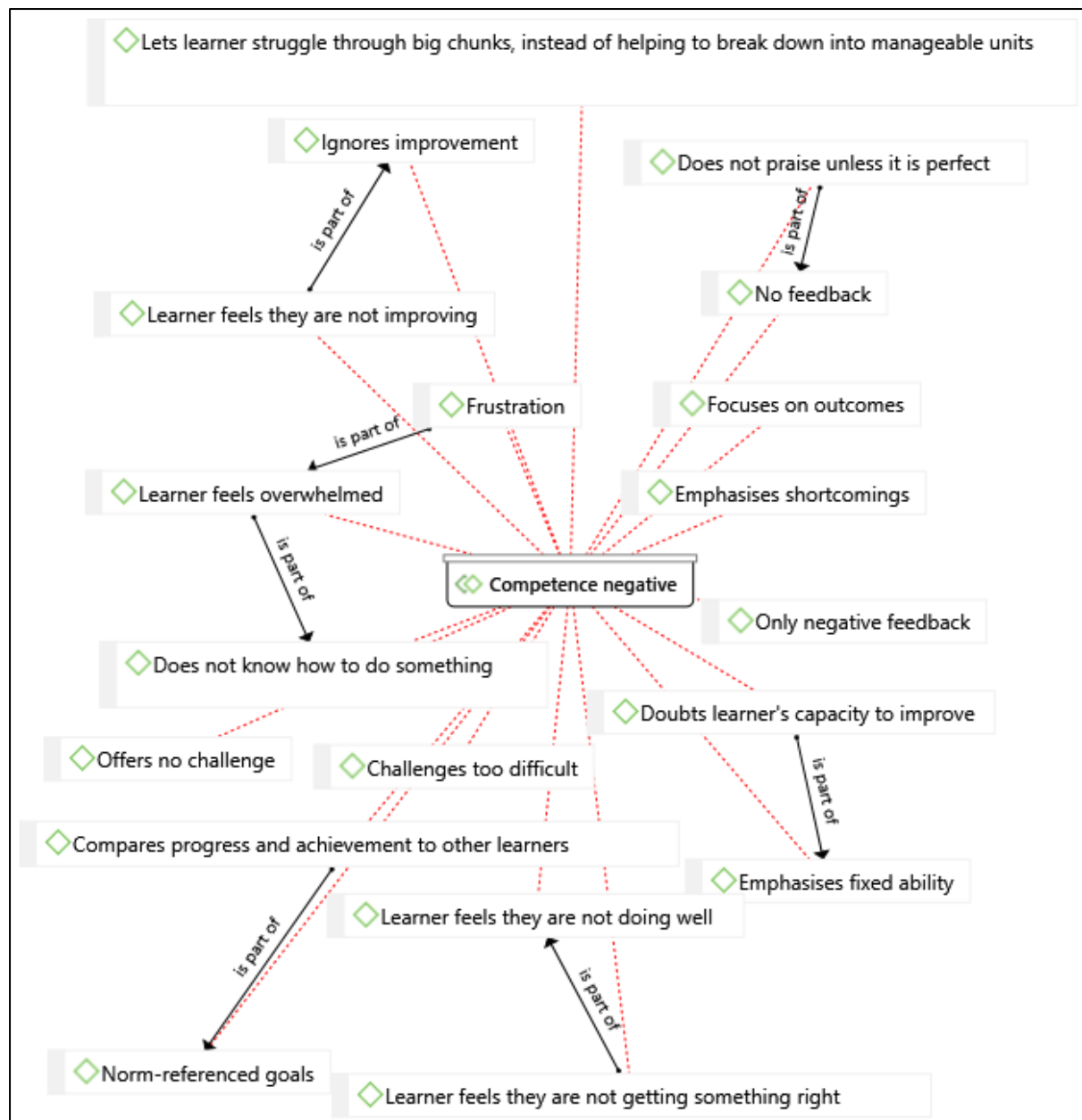
Figure 4-9_Codes_Competence negative

Table 4-2_Codes_Occurrence_Competence negative

Competence negative					
	Anne	Beth	Chris	Dea	Totals
Challenges too difficult	1	0	0	0	1
Compares progress and achievement to other learners	0	0	0	0	0
Does not know how to do something	1	2	0	0	3
Does not praise unless it is perfect	0	2	0	0	2
Doubts learner's capacity to improve	0	0	0	0	0
Emphasises fixed ability	0	0	0	0	0
Emphasises shortcomings	0	3	0	1	4
Focuses on outcomes	0	0	0	0	0

Frustration	2	5	2	3	12
Ignores improvement	0	0	0	0	0
Learner feels overwhelmed	1	19	2	0	22
Learner feels they are not doing well	7	1	0	0	8
Learner feels they are not getting something right	0	4	3	1	8
Learner feels they are not improving	0	1	0	0	1
Lets learner struggle through big chunks, instead of helping to break down into manageable units	0	0	0	0	0
No feedback	3	2	0	0	5
Norm-referenced goals	0	0	0	0	0
Offers no challenge	0	1	0	0	1
Only negative feedback	0	4	0	0	4
Totals	15	44	7	5	71

Challenges too difficult can impact competence negatively, as it is opposed to manageable/optimal challenges. L5 of Anne (Figure 4-10) used the word "uncompletable", which suggests that she perceived some challenges as too difficult. The negative feelings of reaching a "dead-end" must have a negative impact on enjoyment of playing an instrument. The way L5 perceives such challenges may be because she must follow a specific examination board's syllabus, which does not allow one to progress at one's own speed, but where one must meet a set of pre-determined requirements. It could also be that L5 is hard on herself and wants to get something right from the start. In that case, Anne could help her to set reasonable goals and to learn new materials systematically. Beth's L1 (4:15) and L6 (4:73) describe the violin as "difficult" and "challenging". For L1, this is what she enjoys least about her instrument, and she adds that the strings hurt her fingers because they are sharp. To that, another code, *Instrument imposes on physical well-being* was added. It is clearly something that may impact enjoyment negatively, and that teachers should be sensitive towards. It can also be that someone uses the wrong technique, which may be damaging, and can thus work against the goal of lifelong enjoyment, as one may then not be able to sustain long-term playing of that instrument. For L6, her comment was aimed towards practising, and it is interpreted as a negative comment because it was accompanied with a neutral instead of a happy face. For both of these learners, it may be due to the nature of the violin, which is a challenging instrument to master in the beginning stages. One may conclude that a teacher of an instrument like that should be even more aware of ways in which to support competence.
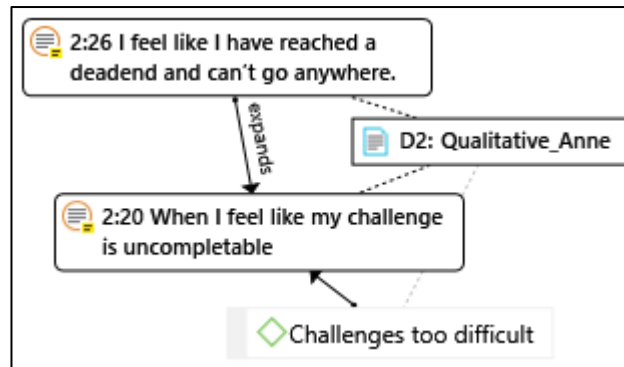
Figure 4-10_Anne_Too difficult

Does not know how to do something will also impact feelings of competence negatively, as one cannot master something one is attempting to do. An example includes L5 of Anne (2:77), on what she enjoys least about practising her instrument: "When I don't know how to play a note". Not knowing how to play a note may hold L5 back from her desire to be able to play something properly. This problem is possibly due to the nature of her instrument, which is the recorder, where one cannot find new notes so easily by oneself when learning. Anne can help by making sure she gives recorder learners practising homework that does not include notes they have not learned. She can, for instance, assure them that the new note in the next section they will do together in the next lesson, and only let them practise up to where they know all the notes. For L1 of Beth (3:34), it seems like feeling that she does not know how to do something is associated with not putting in enough effort with her violin playing and practising. This again supports the case that can be made for practising.

There were only two examples of *Does not praise unless it is perfect*, and they both came from L4 of Beth. L4 struggled with her rhythm when she played with CD accompaniment, and Beth did not praise her on any aspect of her playing – only commented on how L4 does not get it right with or without the CD, and "nou vra jy my hoekom ons nog steeds op hierdie boek is" (3:243). It was also assigned *Only negative feedback*. The following extract is the second example, where L4 (3:244) said she gets the piece right without the CD:

> Beth: "Dis wat jy dink."
> L4: "Ek kry hom reg sonder die CD."
> Beth says again that's what L4 thinks. She says L4 should play and prove her wrong. "Ek weet jy tel verkeerd."
> L4 [laughs]: "Ek weet ek tel verkeerd."
> Beth says that's why she can't play with the music.
> L4 [vividly, using hand motions]: "Dis die hele punt, ek kan nie saam met die musiek speel nie."
> Beth: "Want jy tel nie."
> L4 [giggles]: "Want ek kan nie tel nie."
> Beth: "Jy kan tel."
> L4: "Ek kan nie tel nie [giggling]."
> Beth: "Dis nie waar nie."
> L4: "Dis moeilik."
> Beth says L4 must just remember and learn to count. "Jy gaan dit oefen, ons gaan nie aangaan nie [sighs slightly]".

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The scenario was assigned codes as shown in Figure 4-11. All the codes (except *Teacher is encouraging*) in this example is associated with not feeling competent, or not supporting competence. Beth would not point out something that was good – she rather expected it to be perfect before it deserved positive feedback. She focused extensively on L4's shortcoming of not counting correctly. It is also clear that L4 felt overwhelmed by the difficulty of counting. When L4 revealed that she believes she cannot count, Beth, however, showed encouragement by saying L4's beliefs are not true; she can.
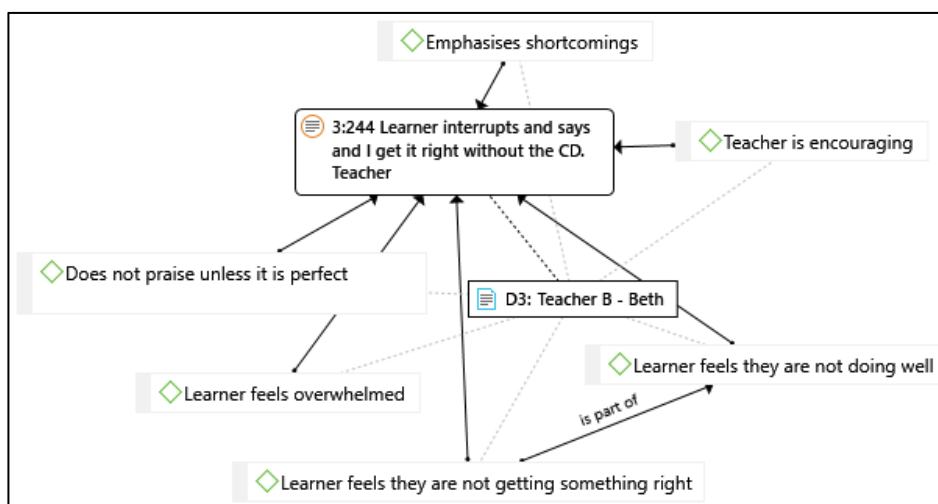
Figure 4-11_Beth_Shortcomings

Another example of *Emphasises shortcomings* was also with L4 of Beth (3:223). L4 complained about still being busy with the same recorder book, and Beth said that is because L4 still makes mistakes. Beth rather could have explained that it takes time to learn to play pieces well, and that they should continue working on the pieces to play it even better. With L6, Beth (3:430) made a disapproving sound about her intonation, and did not give any positive feedback. After they worked on the whole duet that L1 plays, Dea (7:80) pointed out his note errors, while she also could have found something positive to say of his attempt.

Frustration is something that learners feel at some point in the learning process, but it can perhaps be managed positively by teachers. L1 of Anne (2:70) used the exact word to describe practising in general, to which she assigned a neutral face. This was the case for other learners too, and could perhaps be addressed by teachers putting a lot of effort into teaching mindful practise strategies. L6 of Beth (3:386) showed feelings of frustration when the bow went wrong on the violin by making a squealing sound. It was also shown by L2 (5:99) and L3 (5:146) of Chris during their violin lessons. Again, this may be due to the nature of learning the violin, and teachers can extend extra effort to be encouraging in the beginning stages of the instrument.

Learner feels overwhelmed occurred fairly often, and is also in most cases a normal part of the learning process at some stage. It can however be managed positively by teachers. It was signified by words like "oh gosh", "it's difficult", "*dis moeilik*", "it's confusing", "I can't", "I get freaked out", or when a learner loses their place in a piece. In some cases, it could be seen in learners' facial expressions. L1 of Beth (3:36) felt overwhelmed in her violin lesson because she had to focus on more than one technique at the same time. This is characteristic of violin, especially in this case where L1 is still learning the correct technique for position shifting. L5 of Beth (3:362) felt overwhelmed because she found out how little time was left before the concert where she had to perform. In an example from Chris (5:47), L1 said something is difficult, and Chris handled it positively by saying he knows it is difficult, and by suggesting a way to practise only that technique.

For *Learner feels they are not doing well* it seems to help if teachers encourage them or help them to fix the problem that is causing them to feel that way. As it often occurs during practising, teachers could pay more attention to practising techniques to help learners practise more effectively. Interesting to note is an example of Anne (2:37), a comment by L5 about what she enjoys least about lessons. Having to share a lesson with another pupil made her feel that she does not play up to her potential, and thus makes her feel that she does not do well. It may be due to the lack of individual attention from the teacher, or that L5 feels that another learner holds her back. While it seems to make some learners feel safer to have group lessons, it is not everyone's preference.

Learner feels they are not getting something right came mostly from the qualitative questionnaire, and is often described as what learners enjoy least about playing their instruments, having lessons, and practising. In a lesson, it can be approached like Beth (3:229) did with L4. She pointed out to L4 that she got a certain part right twice already; thereby reassuring her that she can do it. The example in Figure 4-12 is the only one of *Learner feels they are not improving*. L4 may perceive not moving on to a next book as not progressing. Beth did not acknowledge her perspective on this (also autonomy negative). If she did, she could have used the opportunity to discuss it with L4 and explain to her why she needs to be busy with the same book for a little longer. L4 however feels comfortable enough to jokingly talk back to Beth, which indicates feelings of relatedness. If teachers provide *No feedback,* learners may not know how well they did, or they may perceive it as negative feedback. It occurred in lessons when learners play and teachers do not provide any feedback; not pointing out at least one thing that was good.
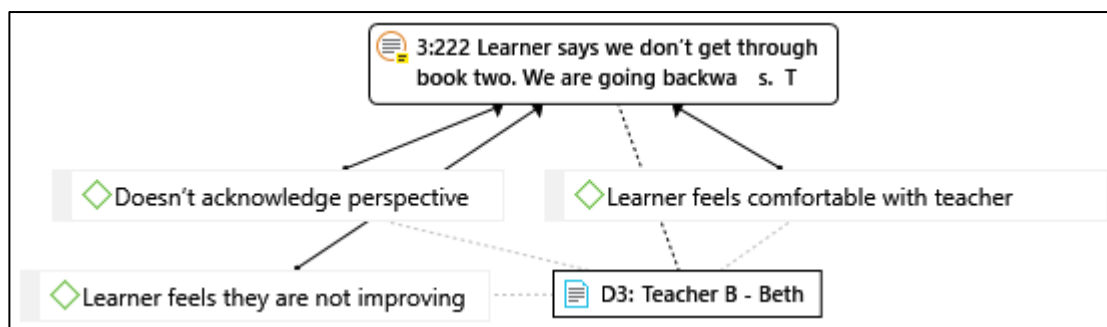
Figure 4-12_Beth_Not improving

Figure 4-13 shows the only example of *Offers no challenge,* and it was assigned other codes too which will be discussed under different subthemes. L2 was asked by Beth to play a simple melody with the juniors in the ensemble, as the one who would have done it could not attend the performance anymore. L2 seemed to react negatively, as he buried his face in his hands. One can read into this scenario that L2 feels that what he is required to do offers no challenge, and therefore also impacts competence negatively.
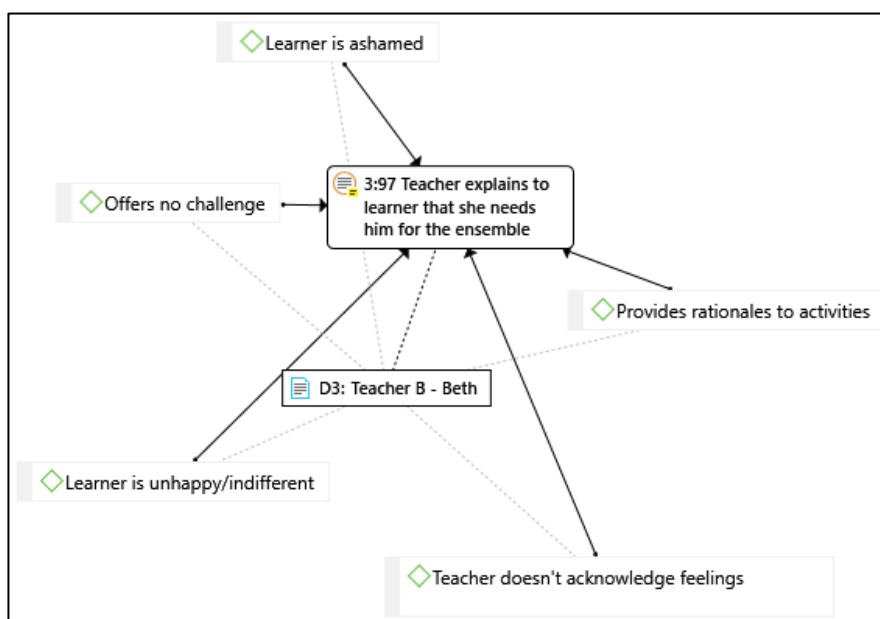
Figure 4-13_Beth_No challenge

Only negative feedback came out in Beth's lessons only. An example includes L2 (3:158), as he was about to play a next piece. Beth said, point number one is his feet are not right, and his back is not right. L2 moved around as if to fix it. Beth pointed a finger in his back and said "sit regop". Although one may argue that these things needed to be said to help L2, Beth possibly could have said it in a more constructive way. Beth (3:166) criticised the same learner for playing a piece below his standard badly. Again, perhaps there really was nothing positive to say, but the criticism could have been delivered less harshly. To L5, Beth (3:36) said that the piece she will play for the concert still needs a

lot of work, and if she wants to play it for the concert, it needs to be ready and perfect by the next week. L5 immediately felt overwhelmed and stressed. Beth could have pointed out something about it that was good, and could have assured her it would be ready for the concert if L5 worked on the following, and perhaps "let's aim to have it concert-ready next week".

In conclusion, competence is fairly simple to support; it can be seen in how many examples could be found in the observations and qualitative questionnaires. Teachers can, for instance, just say "good" for a learner to feel competent. It is also something that can be supported throughout the learning process, and not only if a learner has mastered something perfectly. All four teachers in the study extended effort to support competence, and therefore contribute towards their learners' feelings of competence in many aspects of their instrumental playing. One could also say that practising contributes positively towards feelings of competence, and it is thus worthwhile for teachers to encourage and support that aspect of their learners' instrumental learning. If learners can experience the positive outcomes of practising for their musical enjoyment, it may bring them a step closer to the goal of lifelong musical enjoyment, as independent practising can happen beyond the lessons and those learners' current teachers.

4.2.2 Relatedness

Figure 4-14 shows how relatedness is supported by all four teachers. Three of the teachers scored high on their learners' relatedness satisfaction, with Anne and Beth being the highest. Chris scored the lowest (below 50%).
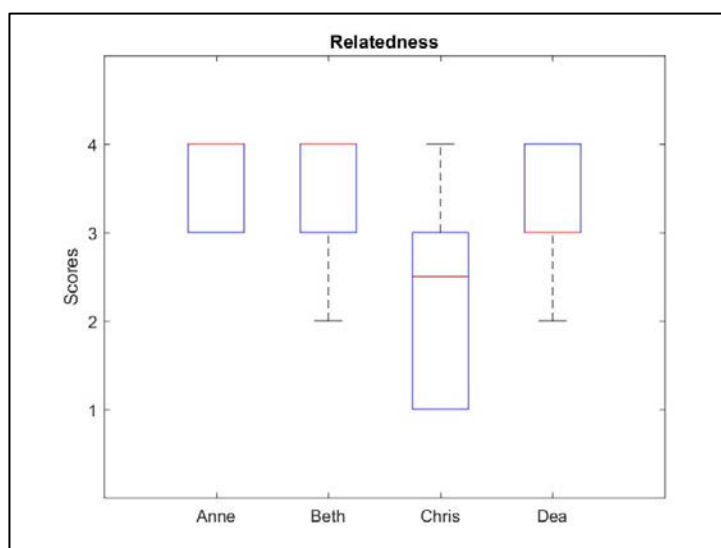
Figure 4-14_Relatedness

Table 4-3 has a p-value of smaller than 0.01, indicating that his results are trustworthy, and one can therefore draw conclusions from it. According to the ANOVA boxplot (Figure 4-15), L2 and L4 feel related to Chris, where L1 and L3 do not feel related to him. This is confirmed by their qualitative questionnaires, where L1 assigned a sad face and L3 a neutral face to how they feel about their teacher. These two learners usually have their lessons together, but for the purposes of lesson observations they agreed to have it separately. L3 specifically is scared to have her lessons alone with Chris.

Table 4-3_ANOVA_Chris_Relatedness

Chris: Relatedness					
Source	SS	df	MS	F	Prob>F
Columns	14,25	3	4,75	19	0,000536
Error	2	8	0,25		
Total	16,25	11			
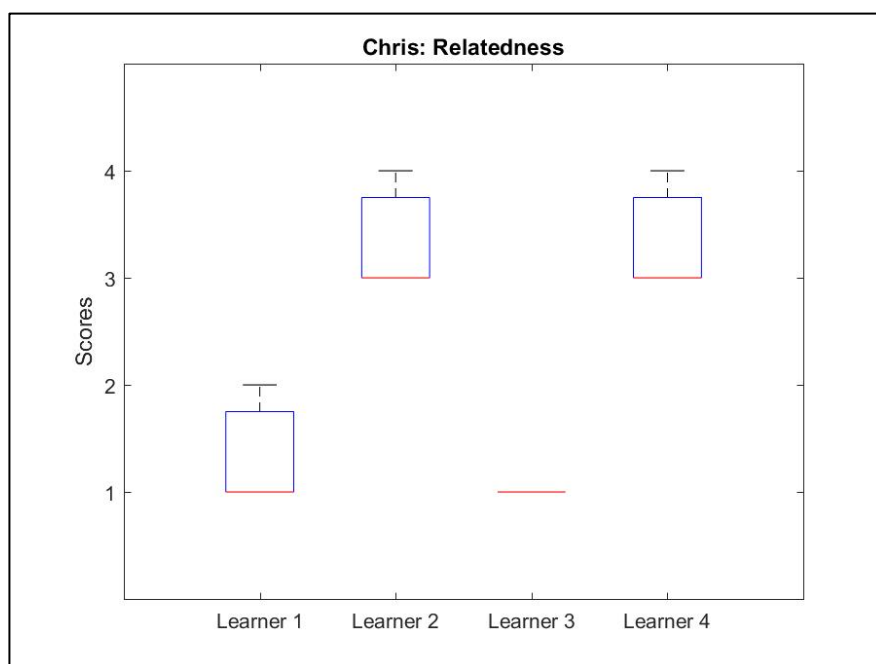
Figure 4-15_Chris_Relatedness

Significant to note is how Beth scored the highest on relatedness; yet L2 shows significantly lower levels of relatedness to Beth than her other learners. In his qualitative questionnaire, he was the only learner who responded with a neutral face to how he feels about his teacher. It can be clearly seen in Figure 4-16. Table 4-4 shows a p-value of less than 0.01 making the boxplot trustworthy. Possible reasons for this finding are discussed with the qualitative data presentation.

Table 4-4_ANOVA_Beth_Relatedness

Beth: Relatedness					
Source	SS	df	MS	F	Prob>F
Columns	10,5	5	2,1	12,6	0,000197
Error	2	12	0,166667		
Total	12,5	17			
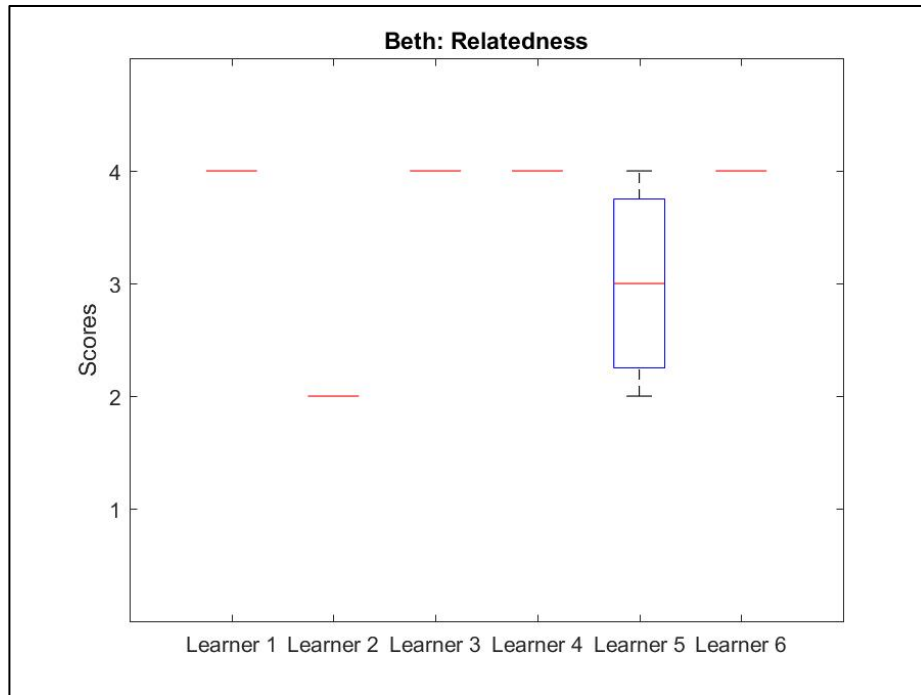
Figure 4-16_Beth_Relatedness

4.2.2.1 Relatedness positive

The codes used for relatedness positive and how they relate to each other are shown in Figure 4-17.

Figure 4-17_Codes_Relatedness positive

Table 4-5 shows how many times each code occurred per teacher and in total.

Table 4-5_Codes_Occurrence_Relatedness positive

Relatedness positive					
	Anne	Beth	Chris	Dea	Totals
Acknowledges music being one of many activities	0	2	0	0	2
Admires teacher	0	3	0	1	4
Brings in humour	18	25	45	8	96
Connects with family through instrument	0	1	1	1	3
Connects with friends through instrumental learning	0	2	2	1	5
Learner feels comfortable with teacher	2	12	0	1	15
Learner initiates affection	0	1	0	0	1

Learner interacts	6	10	5	9	30
Learner likes teacher	2	7	1	3	13
Learner trusts teacher	1	2	0	0	3
Praises efforts	1	4	9	14	28
Supportive/caring gestures	1	0	0	2	3
Supportive/caring language	5	0	0	2	7
Takes interest in learner's activities	0	3	2	4	9
Teacher does not induce guilt and shame	1	0	0	1	2
Teacher facilitates interaction	6	10	6	13	35
Teacher is approachable	1	0	0	0	1
Teacher is friendly	0	4	2	5	11
Teacher is patient	0	0	0	1	1
Teacher listens to learner	0	2	1	3	6
Teacher returns affection	0	1	0	0	1
Teacher shows understanding	5	4	8	2	19
Teacher warmth	0	2	0	3	5
Totals	49	95	82	74	300

There were only two examples for *Acknowledges music being one of many activities,* and both came from Beth. She asked L2 (3:131) if he played a little. Beth thereby acknowledges that the learners are busy with exams and therefore does not have unrealistic expectations for practising. *Admires teacher* appeared in Beth and Dea's learners' qualitative questionnaires, and is signified by learners thinking their teachers are good teachers; one comment included hardworking.

Brings in humour was supported across all the teachers, and occurred very often. It is a simple and effective way to interact and build a relationship with learners. In some cases, it is something that a teacher says that is humorous, and in some it is merely the ability to see humour in a situation and to laugh with their learners; often associated with when a learner or teacher makes a mistake and they can see the humour in it instead of reacting negatively. It goes both ways, as the learners also initiates jokes with their teachers or tease them. Examples include Anne (1:39), where L1 said "I think I also like need to practise it more at home." Anne responded with "I think so [giggles], wow! The lightbulbs." Anne (1:138) with L4: "Okay, now [learner's name], stop shaking, otherwise I'm gonna start shaking." The humour in this case may be a means by which Anne shows that she cares about L4's well-being and does not want her to be stressed. *Supportive/caring language* was also assigned to this example, as Anne showed care and support. L4 told Anne that it was due to being hungry that she was shaking, and Anne (1:174) also showed care in being concerned whether L4 will get her food in time after the lesson.

Beth (3:132) jokingly reminded L2 that he knows what the deal is, if his piece doesn't sound good, he will not play it for the concert; then she will play it. "Pressure's on." This example shows a friendly and light-hearted way in which Beth ensures her learners will prepare for the concert that she has

planned for them. L4 of Beth (3:261) said "ja, en toe't juffrou nog gesukkel" while laughing, and "toe kon juffrou nie dit speel nie", while laughing more. In this example, L4 teases Beth. *Learner feels comfortable with teacher* was also assigned to it. In the comments about her teacher, L1 said that Beth (4:11) makes her laugh a lot.

Chris (5:25) told L1 she must lift her violin:

> Chris: "Are you happy with me telling you all these things? [looking at her intensely with a make-believe serious expression]"
> L1 says she is fine with it and giggles slightly.
> Chris: "Okay you are fine with it. All right. Okay"

This example shows that Chris understands that a violin lesson may feel very demanding to a learner, and he makes a joke with her about the fact that he demands a lot.

Chris (5:142) stopped L3 to ask if they could quickly get a tune. He pretended to be turning a button on L3's forehead and said/sang "C sharp". L3 giggled. When they started again, she played a C. Chris said "we turned the radio off, let's turn the radio back on. And…" She then played the correct C sharp. Chris approached a listening skill that L4 needs to develop for violin with fun and humour, instead of just saying for example "listen to your note and correct it". L3 (6:31) and L4 (6:32) of Chris said that him being funny is the thing they like the most about him.

In an example of Dea (7:139) with L2, she shouted "sorry" over the music. "I thought I heard that in four beats, because I played the wrong track for you!" She giggled. In this example, Dea accidently played the wrong accompaniment track on the CD and laughed at her mistake. Another example of Dea (7:278) was with L3 who did a duet with a friend. When they ended the piece, Dea sang on the highest note "all's well that ends well. At least we ended together [giggling]". Dea made a joke with the learners because they made some mistakes during the playing, but ended well and together.

Connects with family through instrument and *Connects with friends through instrument* are not directly linked to the relationship between learner and teacher, but can also impact a learner's feelings of relatedness positively, as it was also seen that the opposite has a negative impact and can make learners feel isolated (discussed under relatedness negative). Beth's (3:47) L1 clearly connects with the other learners through ensemble playing, as she said to Beth that she wants to practise with them. Between two lessons, Beth's (3:290) learners were having a conversation about the upcoming music concert. Beth's (4:3) L4 revealed in the comments about her instrument that her mother played recorder, and she enjoys it just like her. Chris (5:124) had a conversation with L3 that confirmed that her mother always listens to her when she practises, which shows that she takes interest and possibly spends more time with L3 through her instrumental learning. In the qualitative questionnaire, Chris's (6:1) L1 said what she enjoys most about her instrument is that her friend helps her when she is

wrong. L3 (6:21) said what she enjoys most about her lessons is playing with a friend. Even though L3 does not feel related to her teacher, the way she connects with a friend through their lessons is a positive outcome. Dea (7:99) asked L1 if anyone in his house also played piano, and he confirmed that his dad and everyone in his aunt's house plays. Dea encouraged him to play his duet with them over the holidays. Dea's (7:291) L3 and her duet friend enjoyed doing duets together a lot, as they enthusiastically said "yes" when Dea asked them if they enjoyed it.

Learner feels comfortable with teacher occurred for all the teachers except for Chris. It is an important requirement to have a good relationship with one's teacher, and the enjoyment will presumably be much higher if a learner feels comfortable with their teacher. L5 (2:51) and L1 (2:60) reported feeling comfortable with Anne, and being able to ask her anything (L1). In Beth's lessons, it is revealed through how the learners talk comfortably and spontaneously to her, and are not afraid to question or tease her. One example in Beth's lessons (3:366) was assigned *Learner initiates affection* and *Teacher returns affection*, as L5 said goodbye to Beth with a hug, which Beth returned. It is appropriate that the learner initiated it. Dea's (7:412) L5 felt comfortable enough to make spontaneous conversation with Dea, and told her all about the outing that he didn't enjoy. *Teacher is approachable* was assigned to a comment by L2 of Anne (2:61): "She is very down to earth and is easy to talk to and easy to ask for help."

Learner interacts and *Teacher facilitates interaction* yielded results from all four teachers. It manifests in when learners discuss with their teachers why, for instance, they find something is difficult, giving their opinion, having a conversation about something unrelated to the lesson, talking about their attempts at playing, making comments about their pieces, talking about something that the teacher does, about their practising, or about their families. Teachers facilitate this by taking part in the conversations, or by creating an opportunity to interact if the learner is quiet.

Learner likes teacher occurred mostly in the comments about Beth, but the others were also represented in this. Chris's (6:30) L2 wrote "he's fun", and Beth's (4:51) L1 wrote "Love you ma'am!" with a heart shape, where she only had to assign a face and not write a comment yet. She selected the happy face by drawing a heart around it. For *Learner trusts teacher* there were only three examples, one from Anne and two from Beth. L5 of Anne (2:65) wrote that she can tell her anything. L5 of Beth (3:344) showed trust in her teacher by telling her about how her sister is towards her practising at home, and L1 (4:64) of Beth wrote that Beth will do anything for them.

Supportive/caring gestures include a kind smile from Anne (1:212). Another example is from Dea's (7:175) L2, who fainted during his lesson:

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> Learner sways to the side and tumbles to the ground, making a sighing sound.
> Dea: "Are you okay?" L2 falls further down. Dea takes her saxophone off her neck, and stretches a hand out to help, and says learner's name loudly and concerned. She takes his saxophone off too. She helps him get up and says, "come sit here", taking him by the arm to the piano chair. She asks, "what happened now?".
> L2: "I don't know."
> Dea: "Are you dizzy?"
> L2 is leaning forward and Dea touches his back and neck.
> L2: "No, not particularly."
> Dea: "I'll get you some water quickly."

Teacher warmth was also assigned to this example. Later in that lesson, Dea (7:180) asked L2 if he is feeling all right now, to which *Supportive/caring* language was assigned.

Takes interest in learner's activities is signified by how a teacher wants to know about learners' activities outside of their lessons. Beth (3:2;3:129) took interest in her learners' school exam and asked about how it is going. Chris (5:94) had a conversation with L2 about her church activity the previous evening.

Another example from Chris (5:101) with L2:

> Chris: "Stop quickly … relax."
> L2 giggles.
> Chris: "Forget about that thing [gesturing towards the camera]. "One day when you are on 7de Laan… hopefully 7de Laan will be done by that time… [Everybody laughs now.] … or you are on MNet [makes a dramatic swaying motion with his hands in the air], you know, whoo, I'm on MNet, you know? The cameras will be all over the show. There will be lights, cameras, there will be actiiiiiiiiooooon. You like the stage, you like acting. So, forget about that [the camera]; then you'll have all the fuuun."

Chris shows that he takes interest in L2's love for acting, as he uses this to help her feel more relaxed. Dea (7:412) took interest in L5's school outing and asked him to tell her about it. *Teacher listens to learner* often co-occurred with taking interest, as they listen to the learners' stories instead of just making them quiet or ignoring them. It can also be seen in the way that they respond, as if they really listened.

Teacher does not induce guilt and shame will not just promote relatedness, but also help learners not to rely on introjected regulation. An example is when Anne (1:32) said the following to L1: "Don't say sorry, just go on." In this scenario, Anne could have induced guilt by saying for instance "yes, you should be sorry", or "shame on you", but she did not want the learner to say sorry. Dea (7:434) did not shame L5 for not having practised some pieces, but just said they will go over it now.

Teacher is friendly was assigned to examples where learners describe their teachers as "friendly", "kind", "nice", "*vriendelik*", "*nie te streng nie*", or it can be seen when teachers are smiling. Dea presented one example of *Teacher is patient,* in the form of a written comment by L3 (8:51): "She never gets angry or shouts when I get something wrong." *Teacher shows understanding* occurred

when teachers are sympathetic when learners are faced with difficult or new material, or understand the demands of a lesson, and that learners can only concentrate for a short while. Anne (1:205) said the following to L6: "You'll get used to it [sympathetically]. It's just something new; different to what you're used to, and you just need to get used to it. That's all. Then it's not difficult anymore, like anything in life." Chris (5:17) said to L1 he will just fix her arm, and he can see she is not used to this now. He fixed her right and left hand to be in the correct position. "And the palm of your hand, relax. Be relaxed please my dear." [Pauses] "Hey man, be relaxed nè." [in a show-like manner]" They both smiled and giggled. In this scenario, Chris showed understanding towards the challenges of learning a new technique, and handled it with sensitivity.

Teacher warmth could be seen in Beth (3:248) telling L4 she had the right clothes on for the picture they had to take. Dea (7:297;7:408) acted warmly towards L3's duet partner by thanking her and telling her how nice it was to have her. It could also be seen when Beth's (3:443) L6 finished playing her concert piece with Beth; Beth smiled lovingly and widely, and softly said "so cute".

4.2.2.2 Relatedness negative

Figure 4-18 shows the codes that were used for relatedness negative.
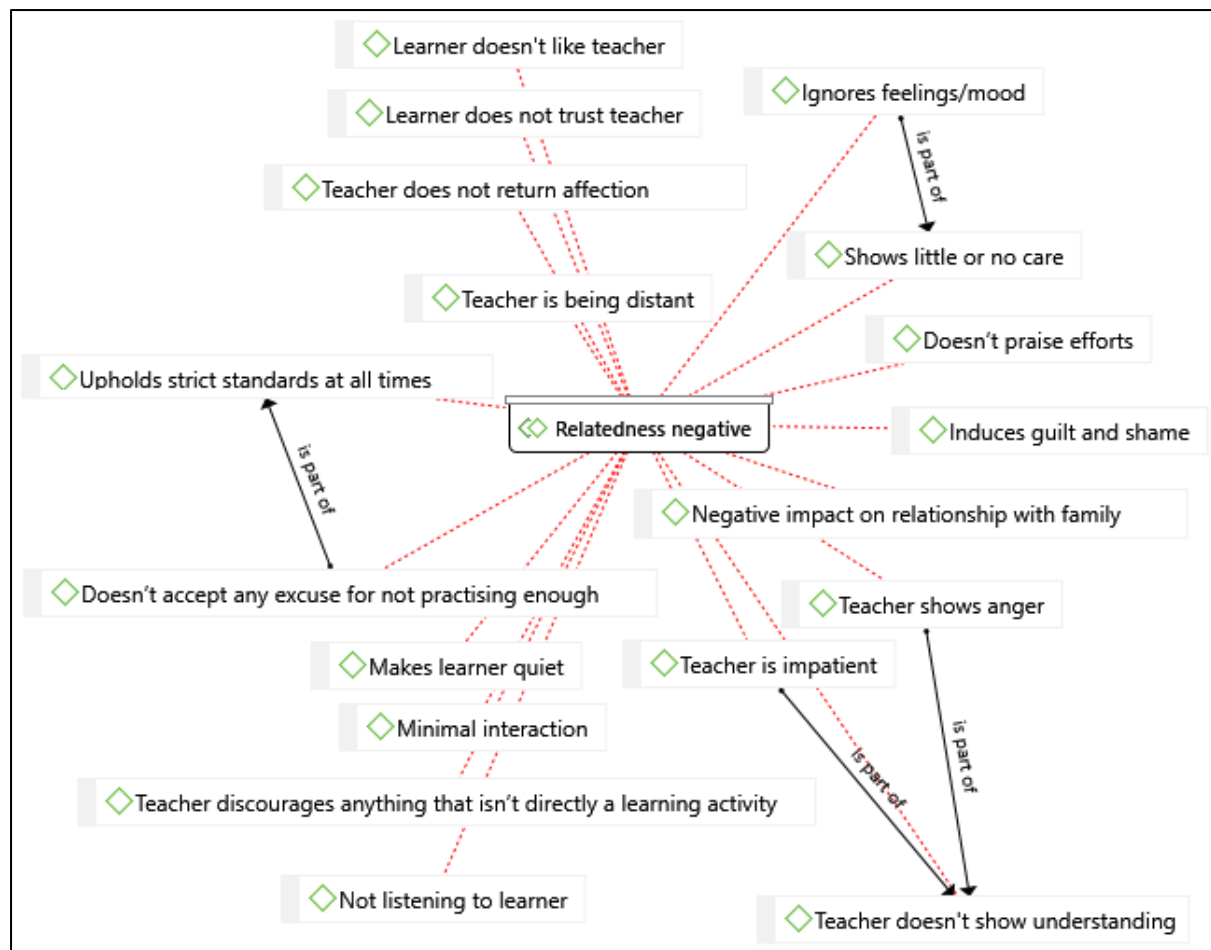
Figure 4-18_Codes_Relatedness negative

As shown in Table 4-6, situations that impact relatedness negatively are outweighed by the positive examples of relatedness.

Table 4-6_Codes_Occurrence_Relatedness negative

Relatedness negative					
	Anne	Beth	Chris	Dea	Totals
Does not accept any excuse for not practising enough	0	0	0	0	0
Does not praise efforts	0	0	0	0	0
Ignores feelings/mood	0	0	0	0	0
Induces guilt and shame	0	2	0	1	3
Learner does not trust teacher	0	0	2	0	2
Learner does not like teacher	0	0	1	0	1
Makes learner quiet	0	0	0	0	0
Minimal interaction	0	0	1	0	1
Negative impact on relationship with family	0	1	0	1	2
Not listening to learner	0	0	0	0	0
Shows little or no care	0	0	0	0	0

Teacher discourages anything that is not directly a learning activity	0	0	0	0	0
Teacher does not return affection	0	0	0	0	0
Teacher does not show understanding	0	0	0	0	0
Teacher is being distant	2	0	0	0	2
Teacher is impatient	0	13	2	0	15
Teacher shows anger	1	3	0	0	4
Upholds strict standards at all times	0	4	0	1	5
Totals	3	23	6	3	35

As a scenario showing *Induces guilt and shame* (also discussed under introjected regulation), Beth (3:198) asked L3 if she practised the same exercise in the D and G major positions, to which L3 said no. Beth said, slightly impatiently, that it is highlighted in yellow, pointing to L3's book). Beth sighed. *Teacher is impatient* was also assigned to this example.
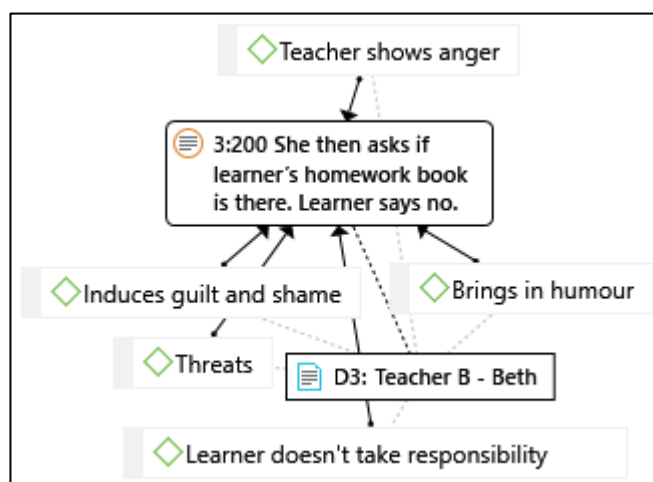
Figure 4-19_Beth_Impatience_Shaming

Figure 4-19 shows another example of Beth:

> Beth asks if L3's homework book is there.
> L3 says no.
> Beth asks why not.
> L3 says she doesn't know where it is.
> Beth says she doesn't know what to do.
> L3: "Ek dink hy's weggepak, juffrou."
> Beth tells L3 which other learners had their books there. She shakes her head. She says something about telling the teacher (supposedly the class teacher) about it to punish them.
> L3 says to her she can't do that, they are not going to sit detention anymore.
> Beth: "Wag tot sy hoor hiervan. Hmmm." (stares into the air with a jokingly smug expression)
> L3 looks up at Beth and smiles as if in disbelief.

Teacher shows anger was also assigned, and can also impact relatedness negatively.

Another example of inducing guilt was when Dea (7:61) asked L1 the following: "You haven't spent much time on the second page, have you? [in a critical tone]" L1 nodded his head slightly. Dea said "I can hear."

There was only one case where *Learner does not trust teacher* was apparent. L3 of Chris (5:113) is afraid of having her lessons alone, and therefore has it with another learner in a group setup. For the purposes of her partaking in the current study, she agreed to have her lesson individually on that day. It is clear that L3 has not formed a relationship of trust with Chris, as she is afraid to be alone with him. Chris (5:132) is also aware that L3 is uncomfortable, and it could be seen in his following remark in L3's lesson: "All right, you know what [learner's name], problem is here, [learner's name] is now nervous, because she is alone here". In the questionnaire, L3 responded with "sometimes" when asked if she feels that she can trust her teacher. With the same learner (5:116) there was an example of *Minimal interaction,* when there was complete silence while she was waiting to play, while Chris took out his violin. This may also be due to the fact that she never has her lessons alone with him; therefore, the situation was still unfamiliar.

Teacher is being distant was assigned to the fact that Anne (1:3) mostly sits far away from her keyboard learners. Giving the learners ample space may help them play comfortably, but may create an emotional distance between Anne and them. Anne may also miss finer technical details on the keyboard, as she cannot see everything from a distance. In L1's lesson with Anne (1:192), there were silences between activities, which Anne could have utilised for conversations to strengthen the relationship. For *Learner does not like teacher,* it was clear that L1 of Chris (6:26) feels that way, from her comment, saying he upsets her most of the time.

As discussed under relatedness positive, just as learners can connect with family and friends through music, it can also have a negative impact on those relationships. The following examples occurred:

L5 of Beth (3:344):

> L5 tells teacher something about "sussie" who says "ek hoor jou, ek hoor jou" at home when L5 plays piano.
> Beth: "Dis net omdat sy nie [inaudible]".
> L5: "Ja, dis wat ek die heeltyd vir my mamma sê." L5 says something inaudible.
> Beth: "Mamma ook?"
> L5 [makes a no sound]: "Pappa."

It appears as though L5's sister and father are bothered by her piano practising at home, and this may cause relatedness issues for her with her family. Dea's (8:56;8:58) L4 wrote the following comment on what she enjoys least about practising: "Having to go to a separate room to my family because they think it is loud." Her reason for the comment was "I feel lonely". In this case, the family may misunderstand L4's music and do not welcome it into their space. The feelings of loneliness may

impact the relatedness between L4 and her family negatively, and it may lead to L4 associating her music with loneliness and isolation, which may diminish the enjoyment thereof.

Teacher is impatient was mostly assigned to Beth's lessons, however, it does not seem to have a negative impact on her relationship with her learners, as they all (except for L2) show high levels of relatedness to her. Often, her impatience is associated with learners who didn't practise enough, or should know something by that time. L1 of Chris (6:28) commented that what she likes least about him is that he gets very stressed. In one example in her lesson (5:6), Chris seemed slightly impatient when L1 did not know he was talking about a scale, when he said it just a moment ago. L4 of Anne (2:55) said that what she likes the least about Anne is that she sometimes might get angry at her. This proves that *Teacher shows anger* can have a negative impact on relatedness in some cases. However, in Beth's case, it does not seem to have that result. It is possibly because of many other ways in which she builds the relationship between her and her learners, and how they feel comfortable with her. Beth showed anger towards L1 (3:7;3:9), but L1 reported the highest levels of relatedness with Beth.

Upholds strict standards at all times came mostly from Beth, with one example from Dea (7:4) and it refers to how a teacher always expects learners to do their best. It does not seem like a negative thing, but as all these lessons took place around the end of the year, one would expect that teachers would have more sympathy towards learners who may be tired or writing exams. The following example is from Beth (3:245) with L4:

> Beth says see, you can practise him…
> L4: "Jaaa, maar"
> Beth says I mean you can count in him.
> L4 says but I practised him so many times.
> Beth says that's the point.
> L4 says I can play it off by heart.
> Beth says you must play [previous piece's name] off by heart too.

This conversation was about L4's piece that she would play for a performance and that she already knows well. Beth meant to use this as an example that L4 can count correctly if she puts in the effort. Beth however makes it clear that she expects L4 to know all her pieces like that, which seems overly strict and perhaps unrealistic.

In conclusion of relatedness, it seems as though Chris acts in support of relatedness in his lessons, but one cannot always see whether it yields results for how the learners feel about him. Although he treated them similarly during to the observations, two learners feel related and two feel unrelated to him. One may speculate that he perhaps talks too much and does not listen to the learners often enough, and this lack of interaction may prevent the relationships between him and learners from developing. It can also be due to the fact that L1 and L3 have their lessons together, and thus never get the chance to know Chris on an individual basis. One may ask why they are afraid to be

alone with him in the first place; could it be due to the gender difference? Beth does many things which can impact relatedness negatively, but it is clear that there are strong relationships between her and her learners, which make the impact of negative actions and words less severe. It is, however, clear that L2 of Beth is the exception. She treats him differently and stricter than the other learners, and he feels less related to her. As Beth stated before lessons commenced, L2 is a problem learner in school and to his parents. It is possible that she attempts to help him improve by implementing strict rules, which causes the relationship to suffer. One can conclude from Beth and Chris's cases that actions not in support of relatedness may especially have a negative impact if the relationship between teacher and learner is not strong. However, once there is a good relationship, the impact of these actions by the teacher is less severe. It is also clear that close family members can have an impact on feelings of relatedness in one's instrumental learning. If parents for instance show understanding and support, or plays/played an instrument themselves, it can strengthen feelings of relatedness from the child, where the opposite can cause feelings of loneliness which could cause unhappiness.

4.2.3 Autonomy

All four teachers got high average scores on their learners' autonomy, as shown in Figure 4-20.
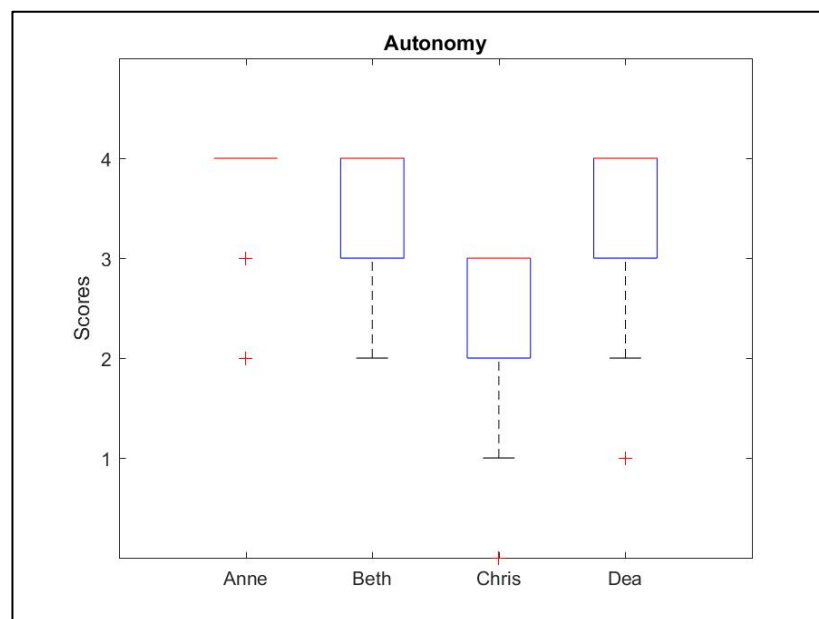
Figure 4-20_Autonomy

4.2.3.1 Autonomy positive

Figure 4-21 shows the codes and their relations for autonomy positive
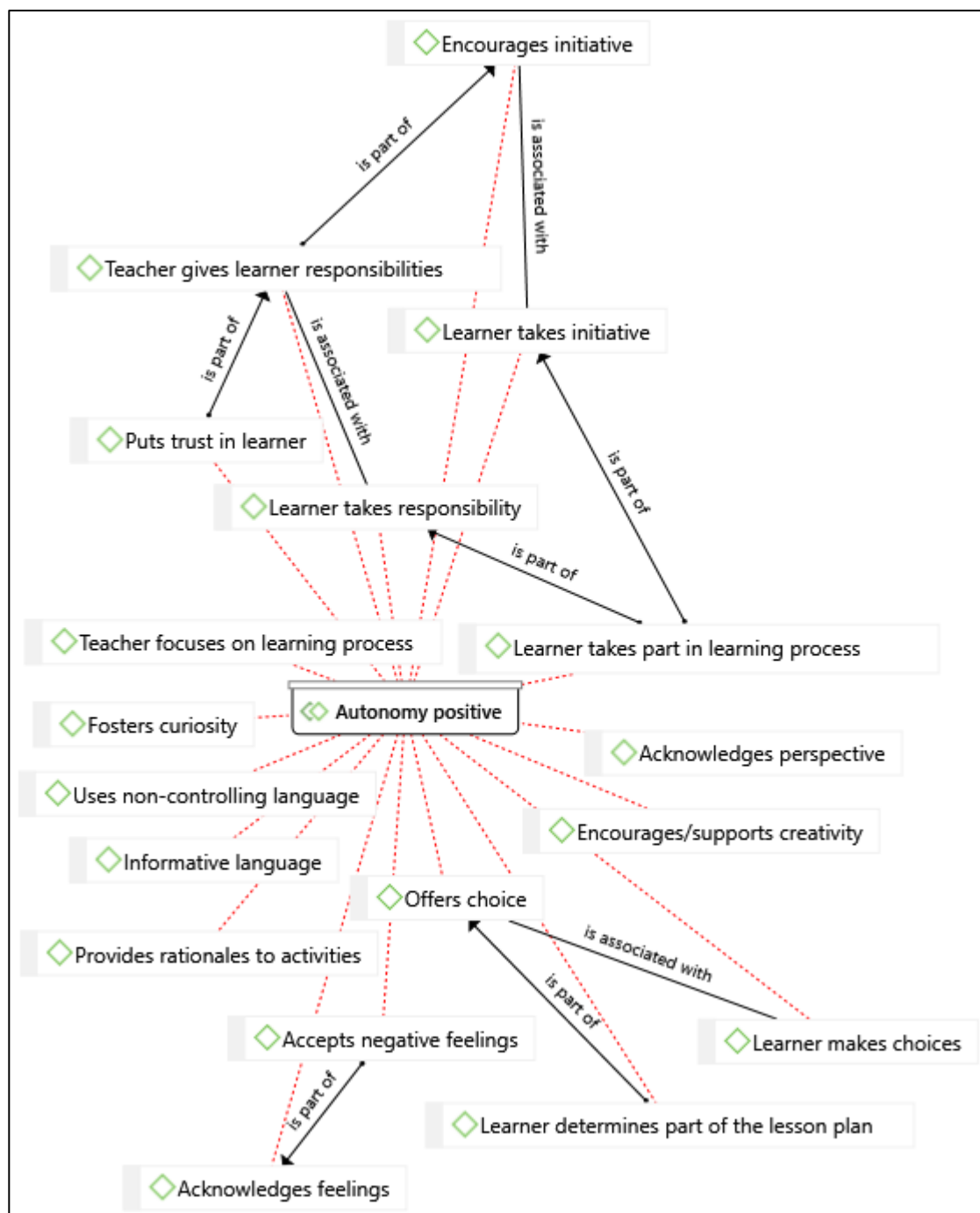
Figure 4-21_Codes_Autonomy positive

Table 4-7 shows how many times these codes occurred.

Table 4-7_Codes_Occurrence_Autonomy positive

Autonomy positive					
	Anne	Beth	Chris	Dea	Totals
Accepts negative feelings	0	0	1	0	1
Acknowledges feelings	0	0	9	0	9

Acknowledges perspective	0	0	2	0	2
Encourages initiative	1	0	1	0	2
Encourages/supports creativity	0	0	0	0	0
Fosters curiosity	0	0	0	0	0
Informative language	3	0	2	0	5
Learner determines part of the lesson plan	2	0	1	0	3
Learner makes choices	2	2	0	3	7
Learner takes initiative	0	3	0	4	7
Learner takes part in learning process	3	15	3	12	33
Learner takes responsibility	2	3	0	0	5
Offers choice	7	5	3	6	21
Provides rationales to activities	3	14	2	8	27
Puts trust in learner	2	0	0	0	2
Teacher focuses on learning process	1	0	3	0	4
Teacher gives learner responsibilities	2	1	1	0	4
Uses non-controlling language	11	4	4	6	25
Totals	39	47	32	39	157

Chris (5:152) was assigned *Accepts negative feelings* when he asked L3 whether she was bored. She said yes and he accepted it and said he knows. *Acknowledges feelings* was only assigned to examples from Chris's lessons. It could be seen in how he acknowledges that learners may be bored, feel sleepy, nervous, or that he is demanding with them by working so hard on technique. *Acknowledges perspective* could be seen in the way that he joked with L1 (5:15) about how he knows she likes to see his back when he walks away when the lesson is over. This shows that he acknowledges that L1 may experience the lesson like this. He also made sure L1 (5:37) understands his comparison of bowings to 90 degrees; that it makes sense to her because she has learned it in class.

Encourages initiative refers to situations where teachers want learners to do something for or by themselves. Anne (1:12) handed L1 a pencil and told her she can write anything in on the music that will help her remember what she has to do. This is opposed to the teacher writing something in on learners' sheet music. Another example is when Chris (5:12) encouraged L1 to put on her own shoulder rest. *Learner takes initiative* was assigned to situations where learners do not wait for their teachers to do something for them, or to tell them to start. L5 of Dea (7:410) started warming up his saxophone while Dea was fetching a stand. L3 of Dea (8:62) wrote that what she likes the most about practising is figuring something out on her own. *Learner takes part in learning process* refers to situations where the learner will have a conversation with their teacher about what they are working on, explaining what is difficult, asking questions, confirming things, correcting the teacher if they think they are unjustly accused, being eager to find an answer, commenting when the teacher informs

them of something, and telling a teacher what is/went wrong with an attempt. There were examples of this for all four teachers, but the most came from Beth and Dea.

Informative language was assigned to situations where a teacher explains something or informs learners in a way that is not threatening or critical. There are only five examples; three from Anne and two from Chris. *Uses non-controlling language* refers to examples where teachers say, "do you want to try it?", or "let's try", "*probeer*", "are you ready?", "let's hear", "let's see" or other ways of asking a learner if they will/can do something, or suggesting something instead of telling a learner what to do. All four teachers are represented in this, with Anne yielding the most results. Anne (1:96) asked if there is a possibility towards the end of the second phrase to go a "tiny bit slower". These ways of saying something sound more open to discussion and voluntary than saying for instance "play it now".

Learner determines part of the lesson plan only occurred three times, was assigned to Anne (1:82;1:176) when she asked learners what they looked at for today. Also, when Chris (5:155) asked L4 if she is going to play her scales for him first. *Learner makes choices* usually goes with *Offers choice.* It was assigned when a learner chose a keyboard setting (1:169), pieces for exams when offered a choice (1:216), chose which piece to perform for the concert (3:258), a mode of accompaniment for the concert (7:392), who will count them in for the duet (7:222), choosing what to do first (7:392), or to complete the questionnaire before or after the lesson (7:409). Other examples of offering choice included a learner who had a choice about what to practise at home (1:82), letting a learner play at the tempo on the keyboard that she practised at home (1:160), what setting to use on the keyboard (1:166;1:171), letting a learner choose whether or not to tune her own violin (5:9;), how a learner likes her shoulder rest to be adjusted (5:13), which piece to learn first (5:53), if a learner is ready to try with accompaniment (7:155), and all the examples provided for when learners make choices.

Learner takes responsibility was assigned to examples where learners take responsibility for making sure about arrangements with their teachers, or take the responsibility to practise something at home that needs improvement. It only occurred in Anne's and Beth's lessons, five times in total. *Teacher gives learner responsibilities* was assigned when Anne (1:37) told L1 if she feels she needs another lesson she can come and arrange one. Anne makes L1 responsible for her own exam preparation, instead of forcing another lesson onto her; therefore *Offers choice* was also assigned. L1 (1:38) responded by taking responsibility and saying that she needs to practise it more at home. Another example was Anne (1:20) who asked L1 to please focus on something at home. Anne gives L1 the responsibility to fix a problem at home (as opposed to drilling her in the lesson), after helping her to do it. Beth (3:46) asked L1 to fetch photocopies from her the next day. Chris (5:3) expects his learners

to show up by themselves for lessons, as he believes they should learn to remember their lesson times. *Puts trust in learner* was assigned to two examples by Anne (1:140;1:141), when she did not check chords and doing an outro on the keyboard in the lesson, as she trusted L4 to do it correctly in the upcoming school exam, as she believes that L4 knows how.

Provides rationales to activities may help learners to understand why they need to do something that their teachers ask them to do. It mostly refers to why they need to learn certain techniques or exercises, or Dea (7:290) explaining to her duet pair that they must perform their duet, "because you can't spend so much time practising something and not share it". Other examples include when L5 named the pieces that she chose for her exam to Anne (1:217). After one that she named, Anne said "no". She explained that it needs to be contrasting, and that she also has to choose a baroque piece. Beth (3:170) explained to L3 why certain fingers play on certain notes in her piano scales, because the first and fifth fingers are too short, making it uncomfortable. She demonstrated that the wrong fingers can do it, but demonstrated and said that the correct fingers are much easier. She stretched her opened hand out across the keys and said her fingers are now the right long fingers for the right long keys. Chris (5:125) explained to L3 why her neck and shoulders should hold the violin, as opposed to her fingers:

> Chris adjusts L3's left hand on the neck of the violin, and says she must be careful not to grip there, and says you must hold it there (indicating L3's neck and shoulder). He tries to let her left arm hang down, but she still wants to hold on.
> Chris: "Hold it, don't be scared." He pulls her arm down slightly and she manages to let her arm hang down.
> Chris: "You see?" He pulls her arm up to the violin again. "This [left hand and thumb] is just for support, so that the hand and arm is free [he moves L3's left arm up and down the finger board like in shifting]".

Dea (7:150) explained to L2 why she lets him practise saxophone with fingers only and no blowing, when he said, "I actually find it easier to blow it instead of just fingering". Dea said "but this is a good way to practise just the fingers so that you're accurate, without blowing".

Teacher focuses on learning process is the opposite of *Extensive focus on evaluations.* Anne (1:218) said to L5 that she can learn the other pieces that she will not play for the exam, as she will not just learn three pieces the whole year. Chris (5:43) said to L1 he doesn't want her to worry about notes, he just wants the sound, and she must stay just there, and then he touched her bow where it should stay. This scenario shows that Chris focuses on the learning process rather than the immediate result. He assures L1 that notes are less important in this exercise.

4.2.3.2 Autonomy negative

The codes for autonomy negative and their relations are shown in Figure 4-22.
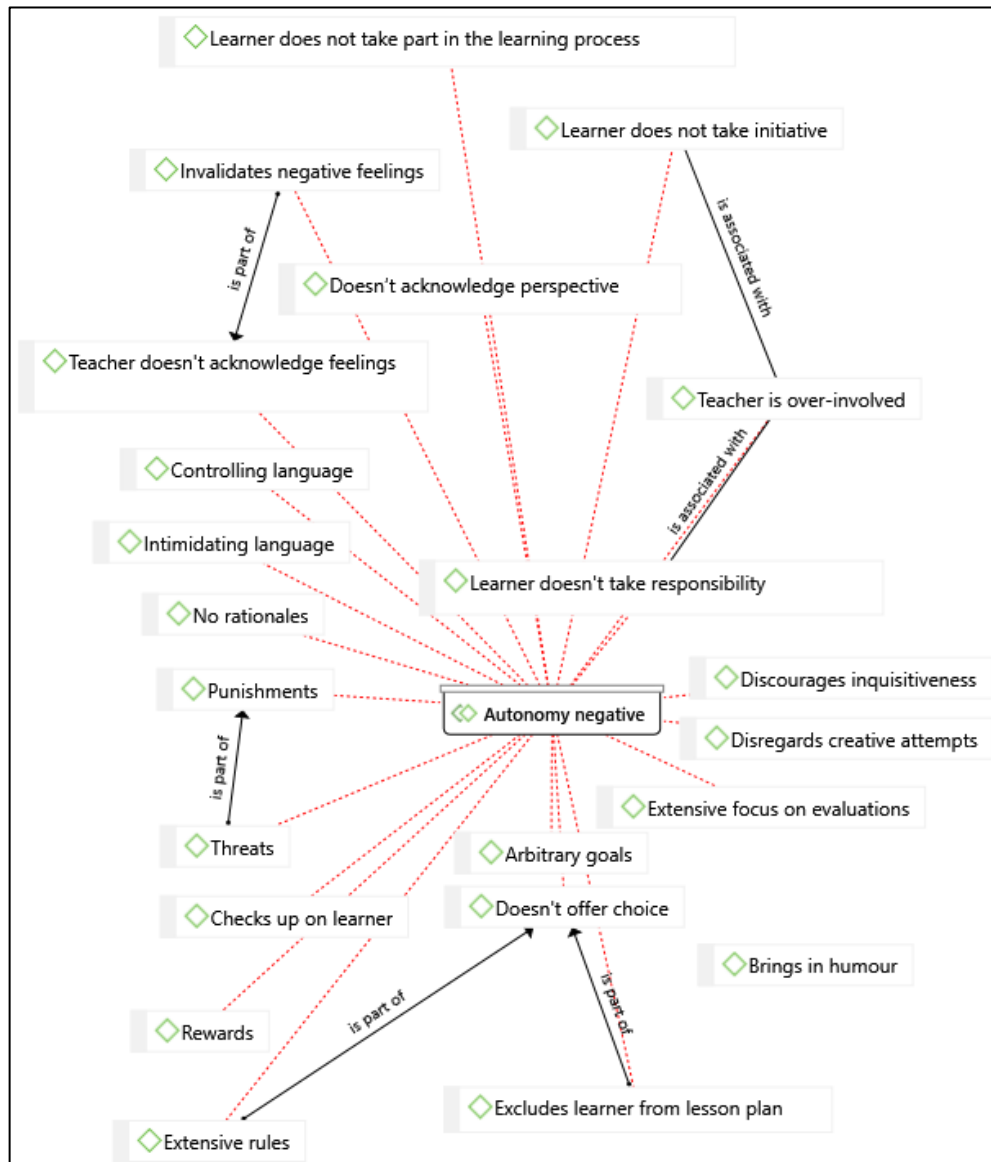
Figure 4-22_Codes_Autonomy negative

As shown in Table 4-8, there are much fewer examples of teachers acting in ways that impact autonomy negatively.

Table 4-8_Codes_Occurrence _Autonomy negative

Autonomy negative					
	Anne	Beth	Chris	Dea	Totals
Arbitrary goals	0	0	0	0	0
Checks up on learner	0	3	0	0	3
Controlling language	1	4	0	0	5
Discourages inquisitiveness	0	0	0	0	0
Disregards creative attempts	0	0	0	0	0
Does not acknowledge perspective	0	2	0	0	2
Does not offer choice	0	1	0	0	1
Excludes learner from lesson plan	4	5	1	4	14
Extensive focus on evaluations	0	0	0	0	0
Extensive rules	0	0	0	0	0
Intimidating language	0	2	0	1	3
Invalidates negative feelings	0	0	0	0	0
Learner does not take initiative	1	1	0	0	2
Learner does not take part in the learning process	0	2	0	0	2
Learner does not take responsibility	0	5	0	0	5
No rationales	1	1	0	0	2
Punishments	0	0	0	0	0
Rewards	0	0	0	0	0
Teacher does not acknowledge feelings	0	1	0	0	1
Teacher is over-involved	0	14	1	0	15
Threats	0	3	0	0	3
Totals	7	44	2	5	58

The following examples were assigned *Does not acknowledge perspective:* L4 of Beth (3:222) said "we don't get through book two. We are going backwards." (Figure 4-12). L4 may perceive not moving on to a next book as not progressing. Beth did not acknowledge her perspective on this. If she did, she could have used the opportunity to discuss it with L4 and explain to her why she needs to be busy with the same book for a while longer. Beth (3:368) also had the following example:

> Beth: "What's wrong with scales?"
> L6: "I don't like scales."
> Beth: "Everyone has such negative vibes towards scales; I don't understand it. Why? It's just notes. What's the difference?"

Beth could have acknowledged that L6 does not like scales, because perhaps it does not feel like making music, or whatever L6's reason is. She could have used the opportunity to provide a reason why scales are important, and where one will use them in the future, for instance when having to sight-read a fast run in an orchestra – when one knows it is based on a scale, it will be much easier. It was also assigned *No rationales,* which was assigned to Anne (1:251) when she did not explain to L5

why she does not want her to put the accents on the second beat, as written in the music. *Does not acknowledge feelings* was assigned to a previous example, where Beth seems not to acknowledge L2's feelings (perhaps unhappy) with regards to a matter (refer to Figure 4-13) – the instance where he seemed unhappy to play an ensemble part which is below his standard.

Does not offer choice was only assigned to one example by Beth (3:443), where she decided on L6's behalf she should play her solo piece for an event, as L6 played the piece well. L6 responded by saying "I don't get a say". Beth could perhaps have approached this by discussing it with L6, explaining why she wants her to play and that she believes she can because of how well she just did it, and perhaps discussing the benefits of opportunities to perform to gain more confidence. *Excludes learner from lesson plan* unfortunately occurred more frequently than the opposite. All four teachers had examples of it, and it involves all instances where the teacher decides on a learner's behalf in which order the lesson will proceed, instead of involving them in the choice of what to start with and what to do next. It is a simple change that teachers can bring which will make them more autonomy supportive.

Intimidating language only occurred three times, but can and should be easily avoided, by just saying something in a different way. Beth (3:163) asked L2 rhetorically whether he doesn't care, when he was unresponsive after her question of what he thinks about his attempt. To L4 (3:241), she said "jy kan nie net ophou nie, [learner's name]" when L4 stopped playing after a mistake. Beth could have explained to her why she should try to go on after a mistake. Dea (7:81) said the following to L1: "I wanna [*sic*] hear, because I wanna [sic] hear if you practised, cause now you don't have any more excuse." Dea perhaps could have discussed with L1 that she understood it was the end of the year, but that they should try to end the year well by him putting in some last effort. In the examples by Beth (L2) and Dea (L1), there is a clear difference in the ways they treat these boys, compared to how they treat their other learners. The difference is that Dea's L1 shows high levels of relatedness to her despite how she treats him, and Beth's L2 shows low levels (as mentioned under relatedness). Dea's L1 is a Korean boy, who seems neutral in all aspects of his instrumental learning. Perhaps Dea finds it difficult to connect with him, as he behaves differently from her other learners. Could his culture have an influence on how he perceives his instrumental playing? *Controlling language* refers to teachers telling learners to do something instead of asking or suggesting. There was only one example by Anne, and four examples by Beth. Beth (3:14) said to L1 "yes you can and you will".

Under *Learner does not take initiative,* Anne's L6 (2:59) said that she doesn't know what to carry on with when her teacher wasn't there for a lesson. Beth (3:10) asked L1: "So you didn't practise scales at all?" L1 responded "you didn't tell me to. [defensive tone]". Even though L1 confessed a moment later that she wasn't telling the truth, this statement implies that she only does something if her

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teacher tells her to, and not because she wants to or finds it important. Beth (3:37) accidentally mentioned the wrong finger that L1 had to use; consequently, L1 played the wrong note, seemingly without noticing. L1 thus passively received information from Beth and accepted it to be correct, instead of critically listening to her own playing. It was also assigned *Learner does not take part in the learning process.* Figure 4-23 shows an example of Beth's (3:162) L2.
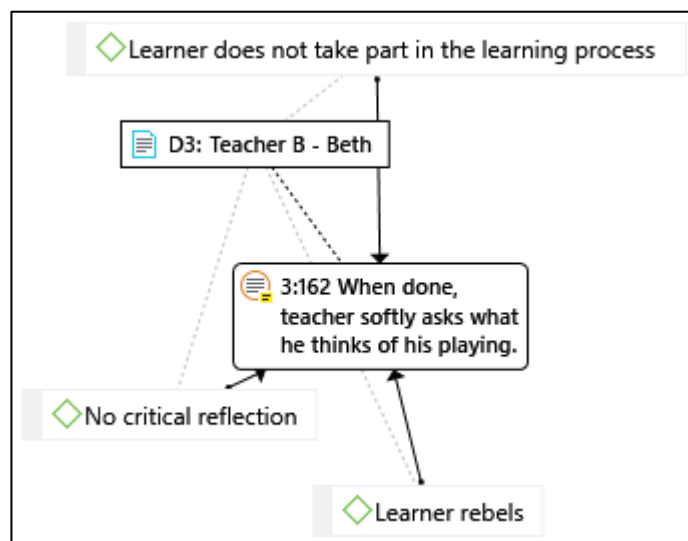
Figure 4-23_Beth_ Not taking part

L2 responded to Beth's question saying he didn't know, and when she further asked, he said he didn't think of anything. He did not seem to try to think of an answer. This instance was also assigned other codes (Figure 4-23), which will also be discussed under OIT and Musical understanding. Similar to these examples is *Learner does not take responsibility,* which was assigned to five instances in Beth's lessons. L1 (3:8) said to Beth that she lost her scale page because she didn't have her violin on the day that she got it. This learner only said it two weeks after it happened, in her lesson. For one scale, L1 (3:17) asked "what's different about this one? I forgot". This indicates that L1 depends on her teacher, and seems not to take responsibility for her own learning process. Similarly, L1 (3:28) said she didn't practise something because Beth didn't tell her to. L1 (3:33) also asked Beth again how slurred arpeggios work, while she had an example in her book in front of her.

Teacher is over-involved was mostly assigned to Beth, and refers to the fact that she is always in her learner's space during lessons (3:3), and often pages through her learners' books to find their pieces or learning material, looks in their bags to take out their books, or packs their books away, while it seems as though they can and should do it themselves, and perhaps would prefer to. Her tendency to be over-involved is also evident in L1's (4:74) written comment that practising is difficult without her teacher. Chris often has physical involvement, for example in the way he physically adjusted L1's position several times (5:26). These extensive physical adjustments by Chris may make a learner feel

uncomfortable, so he could try to sometimes vary it with a verbal cue and let them make the adjustments themselves.

Threats are also part of external regulation, and only three examples occurred in Beth's lessons. Beth (3:157) threatened L2 that she will send the message to his mother, telling her that he doesn't bring his practising schedule to lessons so that she can see whether he practises. Therefore, it was also assigned *Checks up on learner.* Under the same code, Beth (3:155) reminded L2 about his practising schedule, because she wants to see that his mother signed that he practises nicely for 20 minutes a day every week. Similarly, Beth (3:220) looked at L4's practising schedule, and reprimanded her that her mother should still sign, and that she sent an e-mail to them to tell them that even though children do not practise in exam time, they had to sign so that Beth could see that they were listening. Figure 4-19 shows another example of Beth (3:200) giving threats, when she said to L3 that she will tell her teacher to punish her because of forgotten homework books. This example was also assigned *Learner does not take responsibility,* as L3 said she doesn't know where it is, and she thinks it is packed away. At the end, Beth (3:218) said to L3 that she and L2 must bring their homework books the next day, otherwise she will go to their class and tell their teacher to "skel" them.

In conclusion, Beth seems to have many instances of impacting autonomy negatively, both seen in things that she does, and in things that her learners do. Surprisingly, these results are not confirmed by the quantitative data, which shows high levels of autonomy satisfaction in all Beth's learners in the BPNS. Chris scored the lowest on Autonomy satisfaction, although he did not have an average below 50%. It could be that the reality of lessons shows a different account of autonomy, which shows events as they occur, and not how learners perceive things. A real lesson situation may also yield results that cannot be asked in a questionnaire. Conversely, questionnaires may also provide a more objective account, especially in a case where learners are less interactive during lessons, and one can thus not assess their levels of autonomy. All four teachers can still improve on including learners in the lesson plan, instead of dictating the order in which things are done.

4.3 Organismic integration theory

This mini-theory, dealing with different levels of extrinsic motivation against a continuum of internalisation, is important, as not all aspects of learning an instrument will necessarily be intrinsically motivating. Many of those are, however, still important in the process of gaining musical understanding and becoming a musician. Teachers should thus find ways to aid the internalisation process, which would bring a learner closer to long-term musical pursuit.

4.3.1 External regulation

All four teachers received fairly low average scores on external regulation, as shown in Figure 4-24.
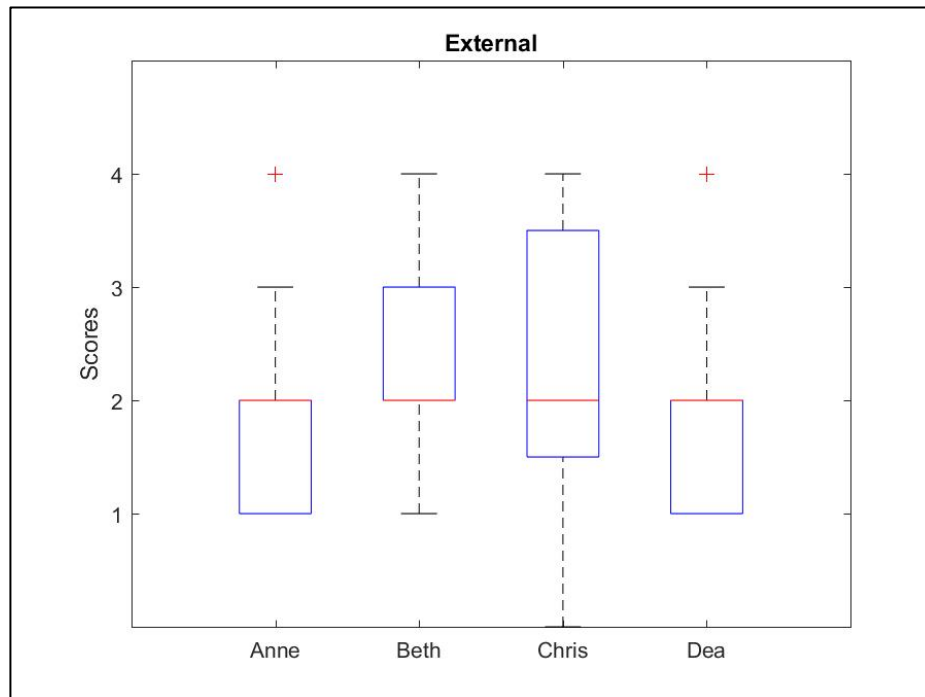
Figure 4-24_External

Figure 4-25 shows the codes and their relations for this part.
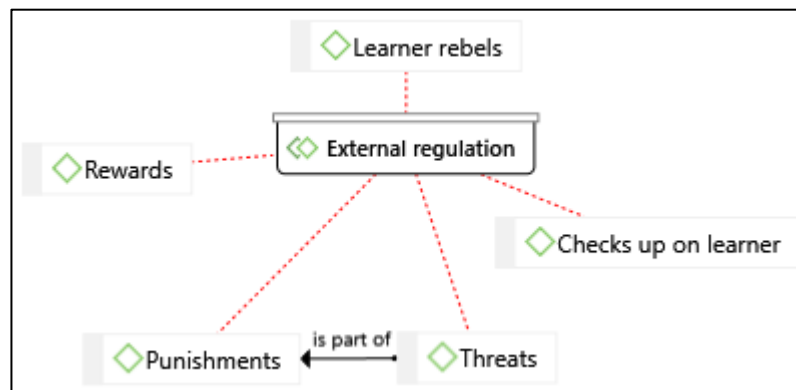
Figure 4-25_Codes_External regulation

Table 4-9 confirms that teachers did not often promote extrinsic motivation by means of external regulation.

Table 4-9_Codes_Occurrence_External regulation

External regulation		
	Beth	Totals
Checks up on learner	3	3
Learner rebels	5	5
Punishments	0	0
Rewards	0	0
Threats	3	3
Totals	11	11

The only examples of external regulation came from Beth's qualitative questionnaires, although Chris had more or less the same average score for this. Table 4-10 shows a p-value significantly smaller than 0.01, indicating that Beth's results for external regulation are trustworthy.

Table 4-10_Beth_ANOVA_External regulation

Beth: External regulation					
Source	SS	df	MS	F	Prob>F
Columns	30,53333	5	6,106667	7,603162	6,22E-06
Error	67,46667	84	0,803175		
Total	98	89			

The qualitative examples of external regulation confirm the high average that L3 received, but not completely L1's low score (Figure 4-26). Important to note is that parental influence is also reflected in the statistical data, as some questions were aimed at how parents regulate their children's instrumental learning. Threats and teachers checking up on learners have been discussed under autonomy negative.
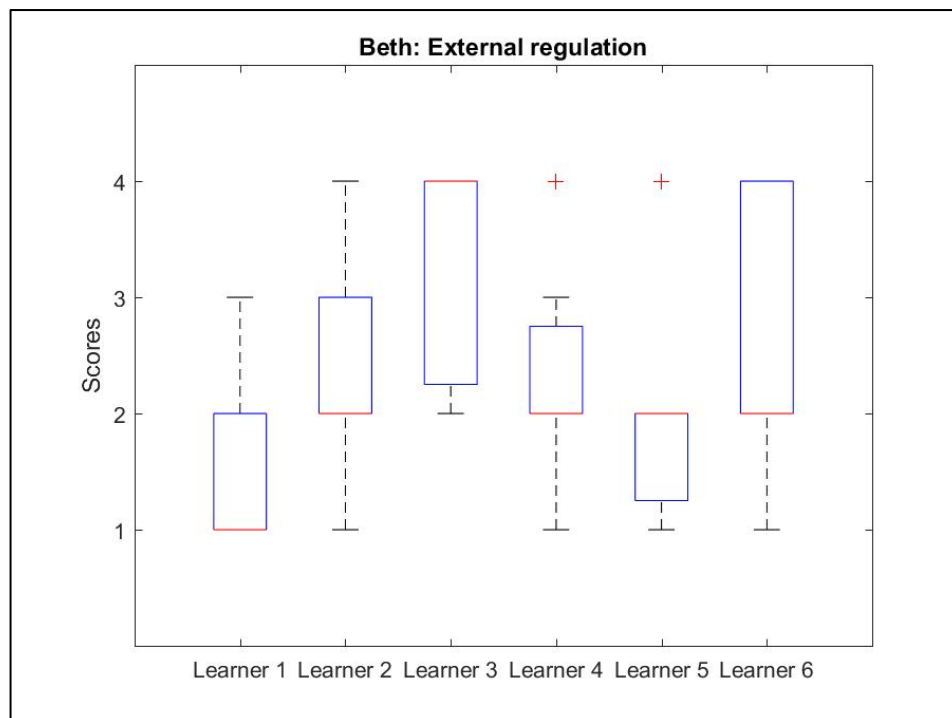
Figure 4-26_Beth_External regulation

There were five examples of *Learner rebels*. L1 of Beth (3:11) said the following when confronted with not having practised: "You didn't tell me to. [defensive tone]". Beth said "I did tell you to. [impatient]". L1 responded "Yeeah you did. [laughing]". L1 presumably tried to get away with lying to be excused from practising her scales. This can be seen as rebelling, instead of honest defiance, and thus falls under external regulation. When Beth (3:154) asked L2 where his practising schedule is, he was mumbling inaudibly and when Beth pointed out that she asks for it every single week, he stared away from her. The fact that L2 never brings his practice schedule, despite Beth asking for it, may indicate that he rebels in that way. He also did not really provide an answer to her question, but stared away from her. Earlier discussed under autonomy negative (see Figure 4-23), was also L2 (3:162), who was asked about what he thought of his playing. The fact that L2 did not put in any amount of effort to answer the question may indicate that he rebels against Beth's authority. Towards the end of L2's lesson, Beth (3:167) remarked that he clearly didn't know his piece at all. He responded by quietly putting up his shoulders. In his comments on what he enjoys the least about playing the piano, he said there are rules (4:22). One could assume that L2 hadn't identified with the value of the rules that he was referring to yet, and his motivation to pursue it is thus not internalised. However, instead of quietly complying, he rebels against it.

Beth applies external regulation by, for instance, checking up on learners by means of signed practising schedules, and by threatening them with their parents or class teachers. L2 responds by rebelling instead of passively complying, showing clearly that his regulation of motivations is not

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internalised. L1 shows similar tendencies less frequently. Her feelings of relatedness to Beth are, however, very high, while L2's is low. Both learners nevertheless show high levels of Competence and Autonomy from their questionnaires. This predicts that L1 possibly falls higher on the internalisation scale towards more internalised forms of motivation. L2 may or may not be there, or may be moving towards it; perhaps he feels more related to some of his other instrumental teachers, or he will transcend the relatedness issue due to his self-reported enjoyment of all his instruments.

4.3.2 Introjected regulation

Figure 4-27 indicates that all four teachers had high average scores (50% or above) for introjected regulation, with Dea having scored the lowest. Not many examples came from the qualitative data, thus introjected regulation can in some cases possibly be induced by parents. The school environment, class teachers, and its influence on learners may also be part of the cause of introjected regulation.
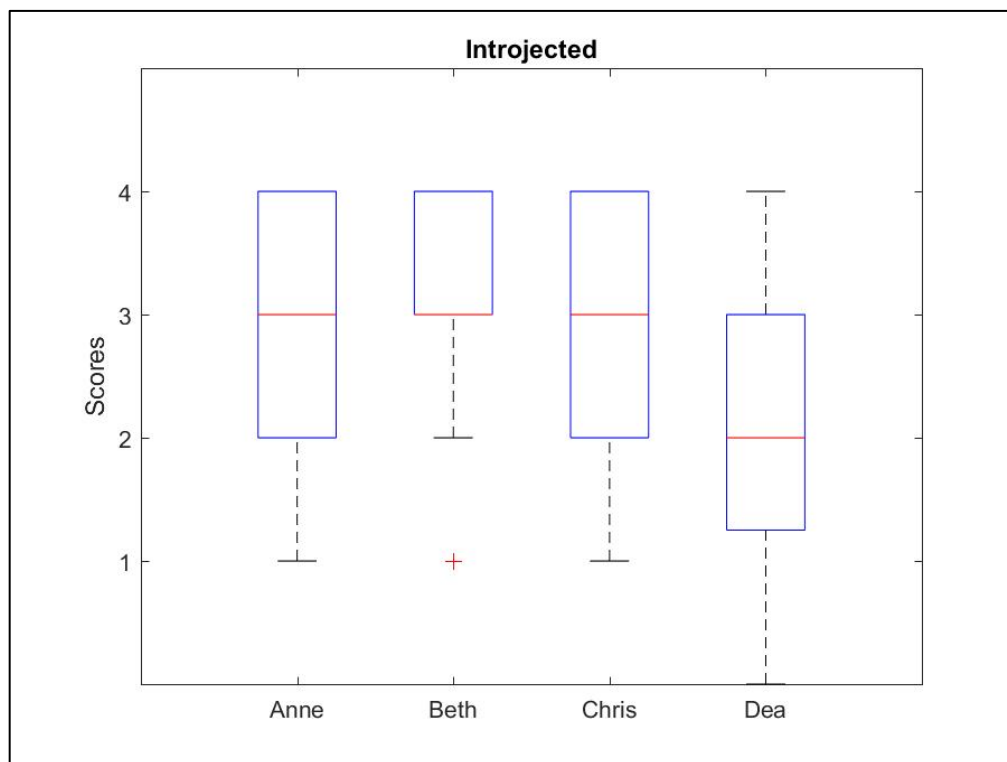
Figure 4-27_Introjected regulation_All teachers

Figure 4-2 shows the codes for this.
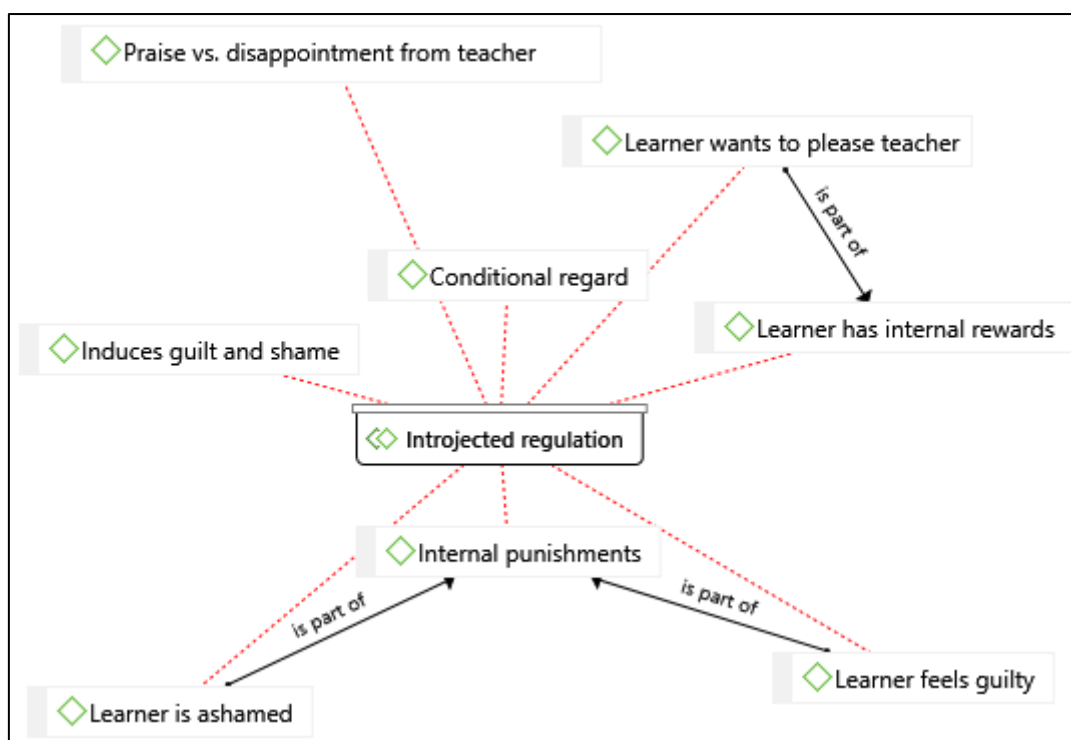
Figure 4-28_Codes_Introjected regulation

Table 4-11 shows that examples of introjected regulation came mostly from learners' perceptions, and are not often seen in teachers' actions.

Table 4-11_Codes_Occurrence_Introjected regulation

Introjected regulation					
	Anne	Beth	Chris	Dea	Totals
Conditional regard	0	0	0	0	0
Induces guilt and shame	0	2	0	1	3
Internal punishments	1	0	2	1	4
Learner feels guilty	4	2	0	1	7
Learner has internal rewards	2	0	1	3	6
Learner is ashamed	1	3	0	1	5
Learner wants to please teacher	1	2	0	2	5
Praise vs. disappointment from teacher	0	2	0	1	3
Totals	9	11	3	10	33

Induces guilt and shame has already been discussed under relatedness negative (see Figure 4-19). The examples included Beth with L3, and Dea with L1. *Learner feels guilty* came from examples by Anne, Beth and Dea, and is signified by learners saying 'sorry' if they make a mistake, or having a guilty facial expression. *Learner is ashamed* came from Anne, Beth and Dea, and is signified by learners confessing shyly that they didn't practise something, or by giggling or smiling shyly when

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making a mistake. L3 of Dea (8:21) wrote that she feels embarrassed if she gets something wrong in her lessons. A slightly different example was already discussed under competence negative (Figure 4-13), and refers to L2 of Beth (3:97) when she asked him to play an ensemble part for a performance, and the part was easy as it was meant for beginners. He may feel ashamed to play something so far below his standard, which may indicate that there is some pride involved in his playing.

Internal punishments are indicated by what L3 of Anne (2:80) wrote about what she enjoys least about practising: "[w]hen I make a blunder during a piece", because "I feel as if I am disappointing someone by making a mistake." One cannot be certain who the "someone" is that L3 refers to, but it can be seen as an internal punishment. L3 is a diligent learner, who entered the class looking tense. Anne watched from above as she was nearing the music building, and commented on her tenseness and worrying. It may confirm that she shows signs of introjected regulation, which is also shown on her qualitative data. L3 may not fully be able to enjoy her music due to this. L4 of Chris (6:14) wrote that she feels bad when she gets a piece wrong, also indicating that she has internal punishments. Similarly, L1 of Chris (6:17) wrote that when she gets a piece wrong in her lessons, it makes her feel bad about herself. L3 of Dea (8:57) wrote that she gets angry when she practises and forgets something from her lesson, because she feels she should have paid better attention.

Learner has internal rewards is indicated by the following example written by L4 of Anne (2:13): "I enjoy trying different things because it makes me and my family proud." How L4's family feels is clearly an important part of her motivation for her instrument. Figure 4-29 shows another example by L2 of Anne (2:46).
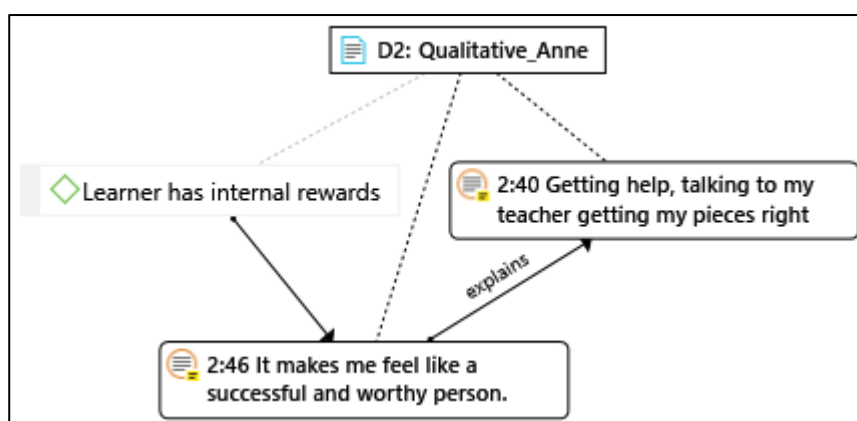
Figure 4-29_Anne_Internal rewards

Although L2 (2:40, Figure 4-29) has indicated competence, associated with getting her pieces right, it is not enough to fully internalise a motivation. L1 of Chris (6:44) wrote that practising makes her "feel good about myself". L4 of Dea (8:66) also wrote she likes to play well, because she feels good about herself afterwards. The use of the word "myself" indicates that their self-esteems may be

contingent upon what they achieve. L3 of Dea (8:5) wrote that she feels proud of herself when she had learnt a piece. She also wrote that figuring something out on her own during practising makes her feel proud of herself. According to SDT, pride can have negative implications for self-determined behaviour, as it is associated with introjected regulation.

Learner wants to please teacher came from Anne, Beth and Dea. Anne's (2:39) L4 said she enjoys getting better from practising, because than she can make her teacher proud. The improvement contributes positively to competence, but the learner making it her goal to make her teacher proud indicates introjected regulation. This is the learner's perception, and whether that is really the teacher's attitude, one cannot tell for certain. Learners also reported feeling they have let their teachers down when not getting something right in the lesson (Beth, L1, 4:36), as L3 of Dea (8:24) wrote that her teacher counted on her to learn her piece. L3 (8:28) also wrote that she likes showing her teacher that she loves playing music. L6 of Beth (4:30) wrote that when she feels she has not practised enough, she worries that her teacher will be disappointed. It was also assigned *Praise versus disappointment from teacher*. Regardless of whether Beth expresses disappointment explicitly, L6 may experience it like that. Under the same code, L1 of Beth (4:56) wrote what she likes least about her teacher: "When I disappoint her, she's very hard on me." L3 of Dea (8:39) wrote the following on the same question: "I feel she is dissap[p]ointed when I don't practise hard enough." This may not be intentional behaviour from Dea, but L3 perceives it as such. On the ANOVA boxplot (Figure 4-30), it is also shown that L3 scored high on introjected regulation (above 50% average).

It is surprising that introjected regulation received high scores across all four teachers, as all three basic psychological needs also scored high for all teachers. SDT theorises that if all three needs are met, a person should have internalised forms of motivation, where one would remain introjected if only relatedness and competence are fulfilled. Interestingly, L2 of Beth, who scored low on relatedness, received a considerably lower score (although above 50%) on introjected regulation than Beth's other learners. Table 4-12 confirms that Beth's data on introjected regulation is reliable.

Table 4-12_ANOVA_Beth_Introjected regulation

Beth: Introjected regulation					
Source	SS	df	MS	F	Prob>F
Columns	10,43939	5	2,087879	4,818182	0,000907
Error	26	60	0,433333		
Total	36,43939	65			
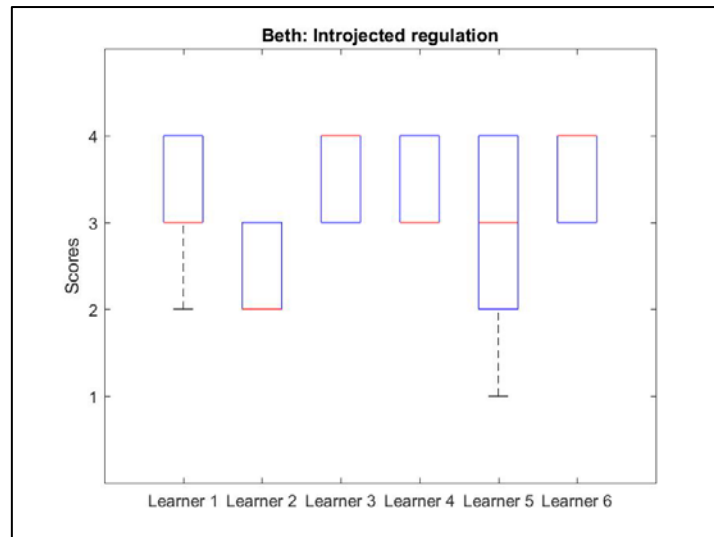
Figure 4-30_Beth_Introjected regulation

Chris's L4, who reported high levels of relatedness to him also scored the highest of all his learners on introjected regulation. The same tendency did not however hold for his other learners. The ANOVA table (Table 4-13) confirms that the results for Chris's introjected regulation are reliable.

Table 4-13_ANOVA_Chris_Introjected regulation

Chris: Introjected regulation					
Source	SS	df	MS	F	Prob>F
Columns	14,79545	3	4,931818	7,138158	0,000597
Error	27,63636	40	0,690909		
Total	42,43182	43			
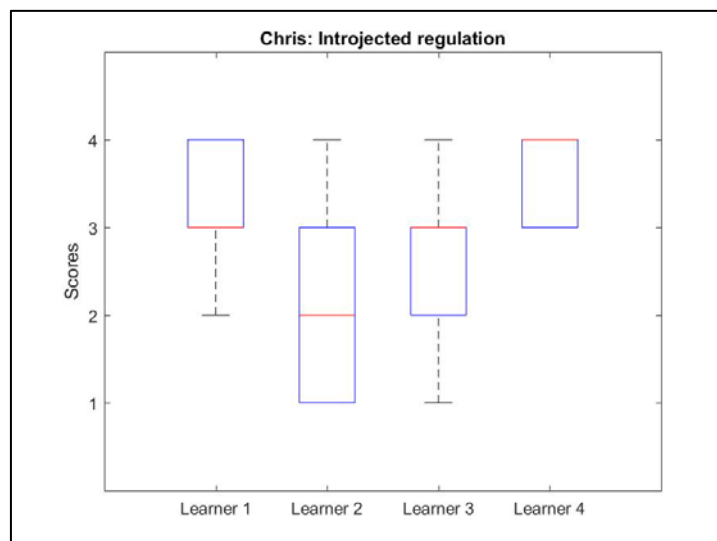
Figure 4-31_Chris_Introjected regulation

Could relatedness in some cases possibly be a cause of introjected regulation? As learners perceive that their teachers (who they feel related to) are disappointed when they 'fail', do they therefore perceive their teachers' approval as conditional? One could also consider the possibility that introjected regulation is a cause of the school environment, or how their parents treat them. Learners may therefore project the conditional regard that they receive from their class teachers or parents onto their music teachers.

4.3.3 Identified regulation

Figure 4-32 indicates that identified regulation received high scores across all four teachers, despite similar findings for introjected regulation.
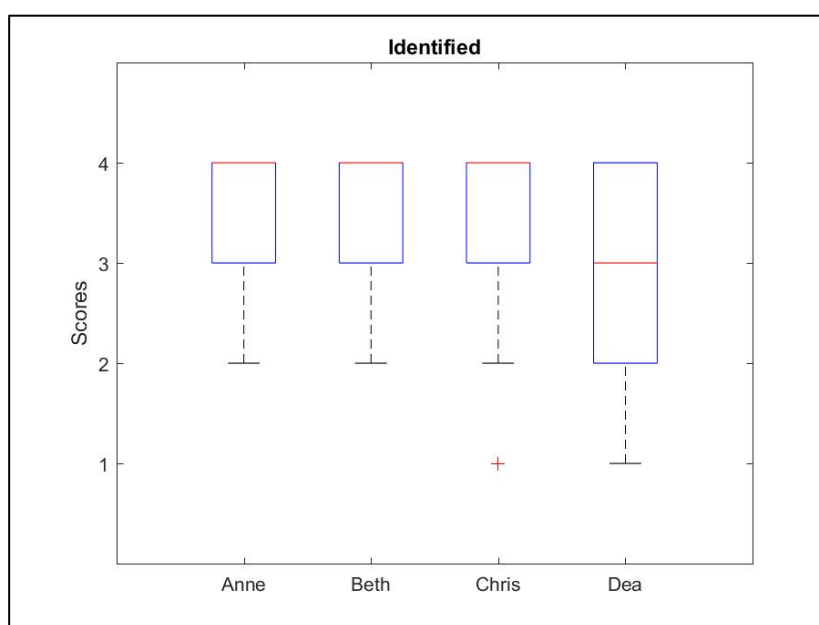
Figure 4-32_Identified regulation

Figure 4-33 indicates the codes used for identified regulation.
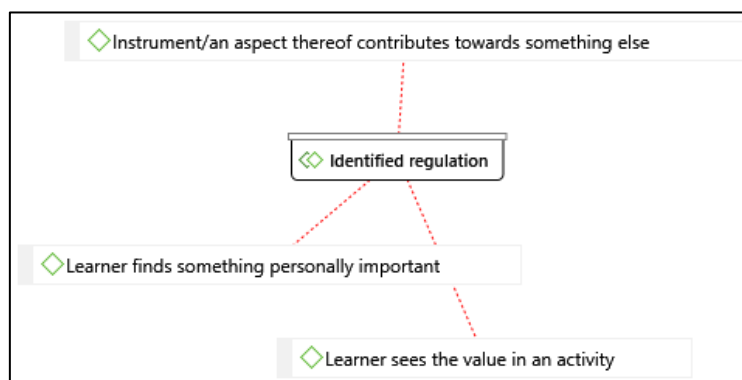
Figure 4-33_Codes_Identified regulation

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Table 4-14 shows how many times codes occurred for each teacher and in total.

Table 4-14_Codes_Occurrence _Identified regulation

Identified regulation			
	Anne	Beth	Totals
Instrument/an aspect thereof contributes towards something else	3	2	5
Learner finds something personally important	1	0	1
Learner sees the value in an activity	0	2	2
Totals	4	4	8

Instrument/an aspect thereof contributes towards something else can be seen in Figure 4-34; L3 of Anne (2:2).
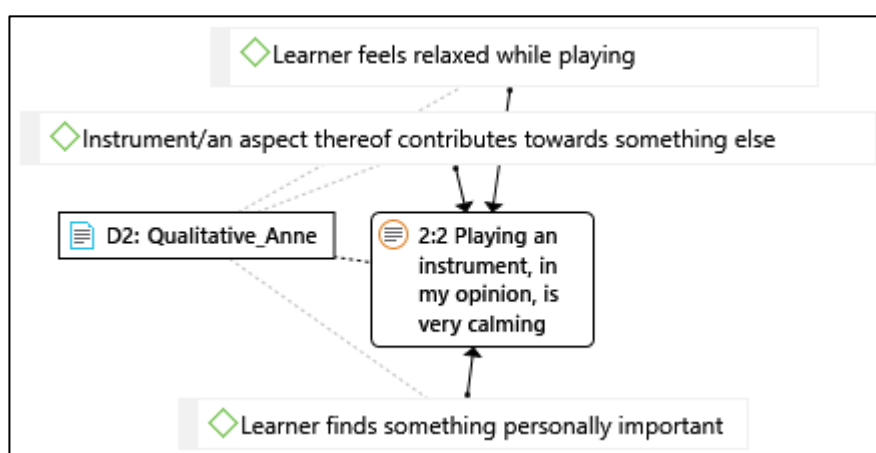
Figure 4-34_Anne_Importance

L3 also said it feels like a necessity; therefore, it was also assigned *Learner finds something personally important.* Instrumental playing clearly contributes towards relaxation, as she finds it calming. She also said "[i]t soothes the school/exam stress, to put it plainly" (2:47). She similarly wrote that practising gives her a break from the stress at school (2:71). L3 thus finds that her instrumental lessons help her to manage stress. L3 of Beth (4:23) identifies with the value of practising, as she stated that she doesn't particularly enjoy it, but does it to get better. L4 of Beth (4:23) said the same about practising. Both examples were also assigned *Learner sees the value in an activity.*

Identified regulation may seem underrepresented in the qualitative data, but it is most probably only because it is less observable than for instance competence support. The high scores for all three psychological needs across all three teachers may also account for the high scores for identified regulation, as it is a more internalised form of motivation which requires all three needs being met.

4.3.4 Integrated regulation

This did not form part of the questionnaire, as it is less measurable. For the qualitative analysis, some measures were, however, put in place for integrated regulation. The codes are shown in Figure 4-35.
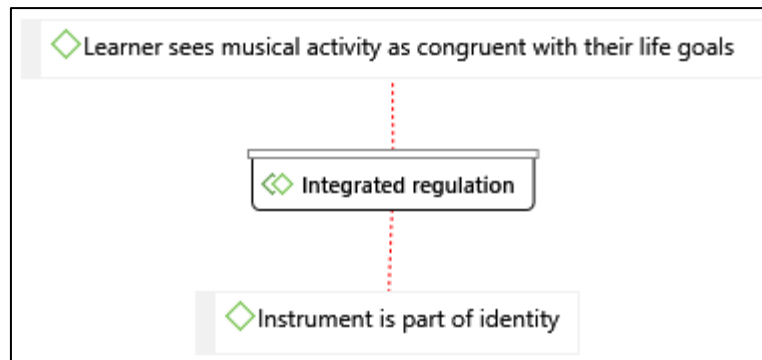
Figure 4-35_Codes_Integrated regulation

For *Instrument is part of identity,* L6 of Beth (4:4) said the following: "Playing an instrument has always been a big part of me." L2 of Dea (8:1) wrote: "My instrument makes me who I am." The comment shown in Figure 4-36, written by L1 of Anne (2:9) was assigned *Learner sees musical activity as congruent with their life goals.*
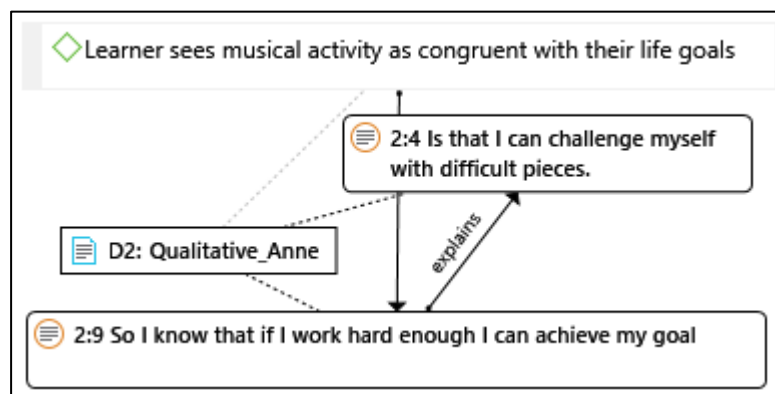
Figure 4-36_Anne_Life_Goal

In conclusion, the high average scores for all the psychological needs are a positive predictor that many of the learners will reach integrated regulation. It brings them closer to the goal of lifelong musical enjoyment.

4.4 Cognitive evaluation theory

This deals with learners' interest, enjoyment, and passion for pursuing an instrument, and ways to maintain this throughout the learning process. This could refer to the initial reasons a learner decided

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to learn a specific instrument, or to engage in musical activity, or an aspect of their instrument that they find to be inherently interesting and enjoyable.

Although the intrinsic motivation boxplot was part of the SRQ, measuring OIT, it is presented under the heading as CET, as it also forms part of the current study. Intrinsic motivation within OIT was meant to show the most self-determined form of motivation against the continuum of extrinsic motivation. As shown, all teachers received high average scores on their learners' intrinsic motivation (see Figure 4-37). The three basic psychological needs were also included for CET, and still showed high scores across the teachers (see Figure 4-38, Figure 4-39 and Figure 4-40).

4.4.1 Intrinsic motivation
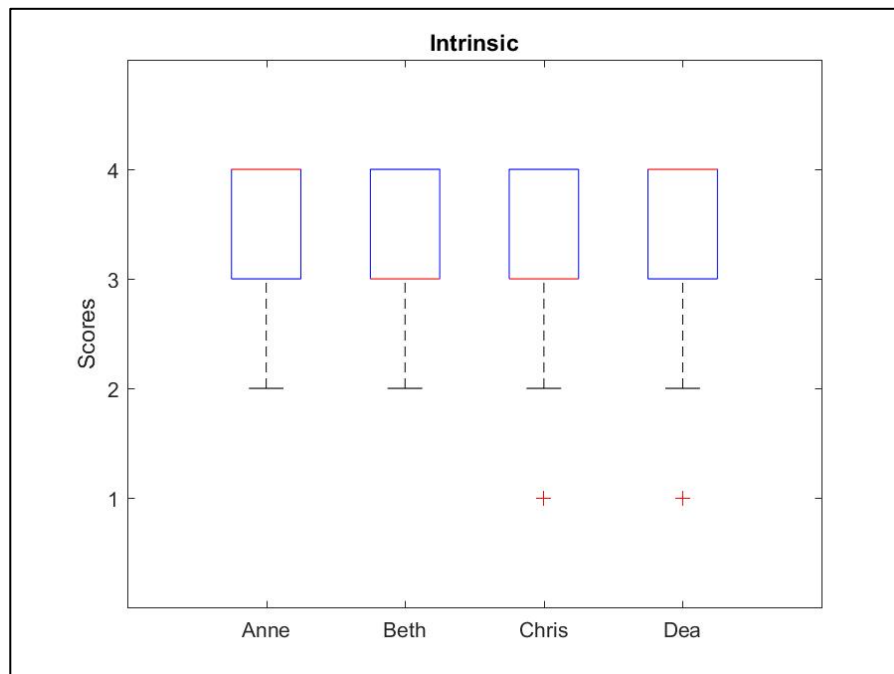
Figure 4-37_Intrinsic motivation

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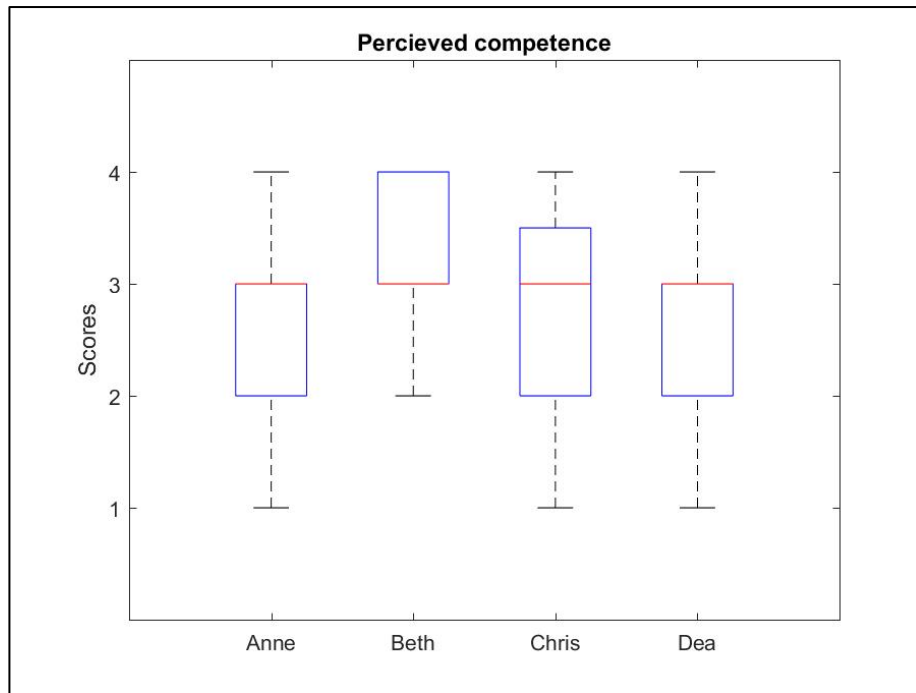
Figure 4-38_Perceived competence
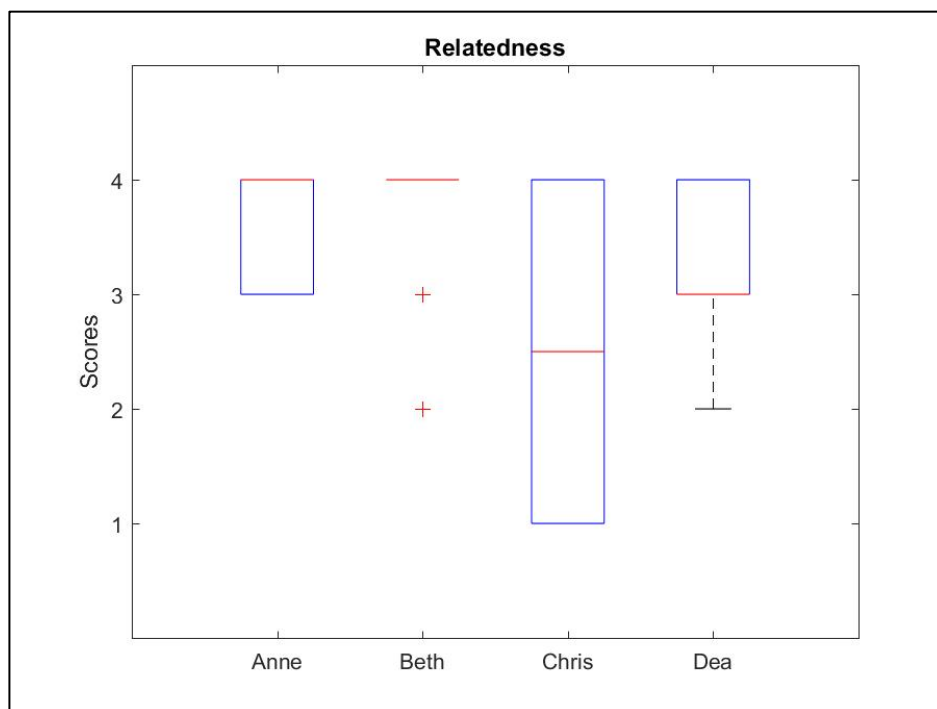
Figure 4-39_Relatedness

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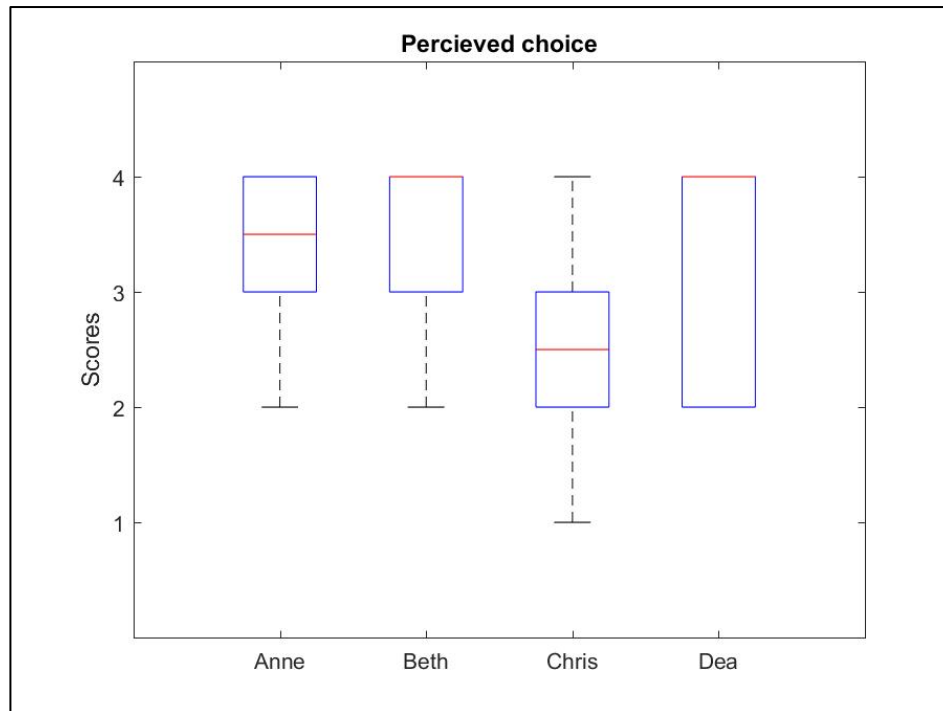
Figure 4-40_Perceived choice

4.4.1.1 Intrinsic motivation positive

Figure 4-41 shows the codes used for intrinsic motivation positive.

Figure 4-41_Codes_Intrinsic motivation positive

Table 4-15 indicates how many times the codes for intrinsic motivation positive occurred for every teacher and in total.

Table 4-15_Codes_Occurrence_Intrinsic motivation positive

Intrinsic motivation positive					
	Anne	Beth	Chris	Dea	Totals
Challenge-seeking behaviour	4	2	1	3	10
Curious exploration by learner	2	1	0	1	4
Excitement	0	3	1	2	6
It feels good	1	2	1	0	4
Learner enjoys repertoire	0	6	0	1	7
Learner feels happy	2	5	3	0	10
Learner feels passionate	0	0	0	2	2
Learner feels relaxed while playing	1	0	0	1	2

Learner likes to perform	0	2	0	0	2
Learner shows enjoyment	7	10	3	15	35
Learner shows interest	3	11	7	8	29
Love for the instrument	0	3	0	2	5
Manageable and/or optimal challenges	2	3	1	0	6
Support of and opportunities for curious exploration	2	0	0	0	2
Teacher does not pressure learner	1	0	0	0	1
Teacher prioritises learner's enjoyment	1	0	11	4	16
Totals	26	48	28	39	141

Challenge seeking behaviour came from Anne, Beth and Dea. Learners described a challenge, or mastering a "difficult piece" (8:61) as enjoyable. It is also supported by *Manageable and/or optimal challenges,* which was discussed under competence positive. *Curious exploration* came mostly from Anne, with one example each of Beth and Dea. For Anne's learners, it was assigned to comments stating that they enjoy trying and discovering new things on their instruments. L4 of Anne (2:7) wrote what she enjoys most about her instrument is that she can try different things. This also indicates *Support of and opportunities for curious exploration.* It could be due to how Anne supports it, or that the keyboard provides many opportunities for exploration. L2 of Anne (2:90), a keyboard learner wrote "I am very curious and like finding things". This comment described her practising time. In her lesson, Anne asked her to put the keyboard a bit faster, to just "hear what it sounds like". This instance may provide the learner with ideas of how she can explore the instrument further at home, and was therefore assigned *Support of and opportunities for curious exploration*. The fact that exploration often happens during practice may show that practising time at home is a valuable opportunity for learners to explore their instrument freely. As the teacher is not present, it may also take away the element of pressure, which can thwart intrinsic motivation. It also indicates autonomy if the learner is doing it at home. It is thus important for parents who oversee practicing to know that this is a necessary part of learning, and may very possibly bring learners a step closer to lifelong musical enjoyment if it is nurtured. They should not discourage it because of wasting time. Other examples of exploration included L5 of Beth (3:364), who was playing something off by heart to herself while Beth was packing her music bag. L3 of Dea (7:285), who was part of the duet pair, was improvising by herself in between the lessons. These instances may also indicate that curious exploration best takes place without intervention.

Excitement came from Beth, Chris and Dea. It was assigned to learners' comments, which stated or implied excitement, and to examples in the lessons where learners acted or reacted very enthusiastically. When Beth (3:262) said to L4 she (L4) plays the upbeat, she responded with "yaaay!". The same learner said that Beth is always full of energy and knows how to make music fun and exciting for you (4:53). She also said that Beth's friendliness and energy make lessons more

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interesting and make her excited about the lesson; therefore, it was also assigned *Learner shows interest*. L4 of Chris (6:8) described new pieces as exciting and what she enjoys most about playing the violin. When Dea's (7:214) duet pair heard what they sound like together for the first time, one of them said "that sounds so nice!". L2 of Dea (8:27) also said his lessons are exciting because he puts in hard work. It is clear that he gets excited about the results that hard work yield.

Learner shows enjoyment occurred frequently and was assigned to all instances where learners explained something as fun, saying they enjoy it, like it, or love it. L5 of Anne (2:3) wrote "[w]hen I think about my instrument I want to play on it." L2 of Anne (2:28) wrote that she enjoys most lessons and look forwards to them while in class. This shows that instrumental teachers can have the ability to contribute towards learners' happiness in school. *Enjoys repertoire* came from Beth and Dea. It referred to examples where learners remarked that they like a piece, or wrote that playing pieces that they like contributes to their enjoyment. L1 of Beth (3:47) said to Beth that she wants to practise 'Star Wars' with the others – they were presumably playing it in the ensemble. L2 of Beth (4:42) wrote down specific names of pieces that he enjoys about his lessons. *It feels good* came from Beth and Chris, and was identified with getting something right or achieving a goal (also under competence positive).

Learner shows interest also occurred often, and across all teachers. It was assigned to learners commenting about enjoying learning more, trying new pieces, wanting to know how to play a new note, starting to play by themselves, and describing their instrumental learning as interesting. Other examples were of Chris: L2 (5:76) told Chris that yesterday's practising went really well. L4 wrote that what she enjoys least about lessons is being late, saying "then I don't do anything" (6:18). This implies that she wants to learn something when having a lesson. L5 of Dea (7:436) said to her that he needs a new "thing on the saxophone's sling, this one keeps slipping off". This is a sign of interest, as he takes interest in maintaining his instrument and additional things that one needs for it. The same learner also had the following example (7:451, Figure 4-42):

L5: "I'm suddenly getting a tune now."
Dea: "Yes, it's 'Away in a Manger'."
L5: "I know, I know what it is, but the way I was playing it I couldn't hear any tune at all and now I'm actually getting it."
Dea: "Let's do from there."
L5: "That's one thing I notice from when I'm doing my favourite songs, like when I did the 'Pink Panther' all I heard was this: learner plays the notes slowly. Learner says and then when I started doing it at the right speed I could hear: learner plays the beginning of the intro at the right speed."
Dea: "When you play the correct rhythms you can hear the melody making sense."
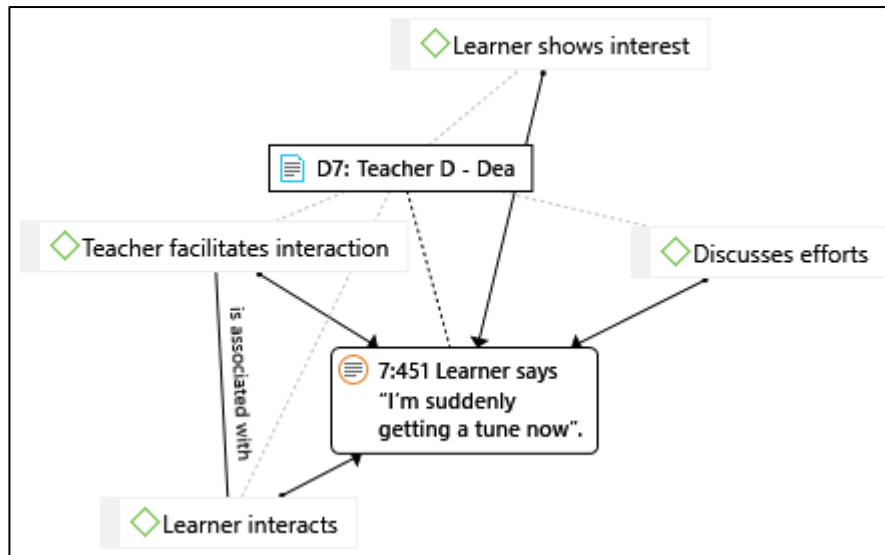
Figure 4-42_Dea_Interest

In this example (Figure 4-42), L5 showed interest in playing correctly and in such a manner that one can recognise the tune. L3 of Dea (8:5) wrote "I like to listen to the music I am playing […]" . She shows interest in the music that she is learning.

Teacher prioritises learner's enjoyment came from Anne, Chris and Dea. It manifests in teachers saying that they want a learner to enjoy something or have fun, or by asking learners if they like something or enjoyed playing. Anne said to L4 (1:170) that she must set the keyboard to a setting that she will enjoy. Chris to L2 (5:98): "Enjoy it, have fun, bring some life into it. Bring life into Mozart; Mozart is life." He also encouraged the other learners to enjoy playing. Dea (7:83) asked L3 and her duet partner if they enjoyed playing together.

Love for the instrument yielded five examples in total, from Beth and Dea:

L4 of Beth (4:2): "Ek hou baie van blokfluit, […]"
L6 (4:63): "She doesn't just teach you how to play your instrument, she shows you how to be friends with it."
L2 (4:69): "Ek hou baie van al my instrumente."
L4 of Dea (8:3): "I like my instrument."
L2 (8:4): "The touch of it is amazing!"

A love for the instrument is important to instil a love for making music; it is therefore important to choose an instrument that one enjoys and feels comfortable with. *Learner feels passionate* was assigned to two examples from L3 of Dea:

L3 (8:9): "Music is my passion."

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8:32: "I do love playing music."

Learner feels happy was assigned to examples where learners were laughing and smiling in their lessons, and when they wrote that they feel happy when playing or practising. It came from all teachers' learners, except Dea. This does not imply that her learners do not feel happy, there just was not a clear example. *Teacher does not pressure learner* only had one example, where Anne (1:5) undertook L1's aural section of her practical exam. She assured her that she will not evaluate her on the first time that she shows the time signature, so she can use that to work it out. *Learner feels relaxed while playing* yielded two examples, which came from Anne and Dea. L3 of Anne (2:2) wrote playing an instrument is calming, and L3 of Dea (8:10) wrote "[w]hen I play I don't feel nervous or tense." This learner probably does not feel nervous when performing. There were two examples of *Learner likes to perform,* both by L4 of Beth (4:39): "Ek praat baie en teen die tyd wat ons begin het ek 'n bietjie te min tyd oor om af te shou (*sic)*." She also wrote that what she enjoys most about lessons is to show what she mastered over the past week (4:49).

The fact that especially enjoyment yielded many examples, shows that these teachers are generally successful in maintaining learners' intrinsic motivation, which is the ultimate form of self-determined motivation, and may therefore lead to lifelong musical enjoyment. Practising time showed to be valuable for exploring curiously, and it should thus be emphasised to parents that they should not supress it on the basis of wasting time. According to the results of the current study, many of the learners will potentially enjoy music long term, as the teachers are mostly showing support for their basic psychological needs, which will sustain intrinsic motivation, which is already fairly high on average across all the participants.

4.4.1.2 Intrinsic motivation negative

Figure 4-43 shows the codes for intrinsic motivation negative.

Figure 4-43_Codes_Intrinsic motivation negative

Table 4-16 shows how often each code for intrinsic motivation negative occurred in the teachers and in total.

Table 4-16_Codes_Occurrence_Intrinsic motivation negative

Intrinsic motivation negative					
	Anne	Beth	Chris	Dea	Totals
Avoiding/afraid of challenges	0	4	0	0	4
Boredom	1	3	1	2	7
Challenges too difficult	1	0	0	0	1
Learner does not explore	0	0	0	0	0
Totals	2	7	1	2	12

Avoiding/afraid of challenges manifested in learners writing that their instrument (4:15;4:20), lessons (4:35) and practising (4:73) are difficult or challenging, and it was something they do not enjoy. The

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only example of *Challenges too difficult* has been discussed under competence negative (Figure 4-10). L3 of Anne (2:20) described an 'uncompletable' challenge as something she enjoys least about her instrument. *Boredom* came from all four teachers' learners, and refers to learners not enjoying doing the same thing over many times (2:79;4:38), repeating something in a lesson (8:26;8:43), or doing the same piece for a long time (4:24;5:152). L2 of Beth (4:32) wrote that some songs are boring, and it was also assigned *Learner does not enjoy repertoire.* The following example shows that Chris (5:152) deliberately bored L3:

> Chris stops; L3 says "aaah", making a forward falling motion.
> Chris: "Is it boring?"
> L3: "Yes."
> They both laugh.
> Chris: "Why is it boring, because we did this so many times?"
> L3: "Yeeah. [nods]"
> Chris says yes, he did it on purpose, because he knows L3 is one of those kids who gets bored. "So, there we had our boring lesson".

It appears Chris had a goal with boring L3; perhaps he wanted her to learn that one will sometimes have to play the same repertoire for a long time, and that one should keep putting effort in and showing enthusiasm. Earlier in the lesson he also said that he would continue until L3 had fun with that piece (5:134). This could be a valuable lesson for continuing with music, and possibly being part of the industry, as performers have to play the same repertoire for a long time, but keep in mind that the audience possibly hasn't heard it before. As this is a lesson that goes against intrinsic motivation, internalisation would need to take place. Unfortunately, this learner does not feel related to Chris, which may inhibit the internalisation process of less enjoyable activities that Chris tries to instil in her.

Learner feels pressured was explicitly stated as something that L1 of Chris (6:9) enjoys least about her instrument, and L3 (6:27) likes it least about Chris that he puts pressure on her. L1 (6:12) further said "[b]ecause it makes me feel stressed.", and it was assigned *Learner feels stressed.* Confirming this, the only examples of *Teacher pressures learner* came from Chris's lessons. He said to L1 (5:57) that she should have a good posture, otherwise the people at the concert will ask their money back and say, "this was just nonsense man". Even though this comment was presumably meant as a joke, it can come across as pressure from Chris, expecting L1 to perform perfectly. Figure 4-44 is also an example from L1, when she played with Chris (5:61).
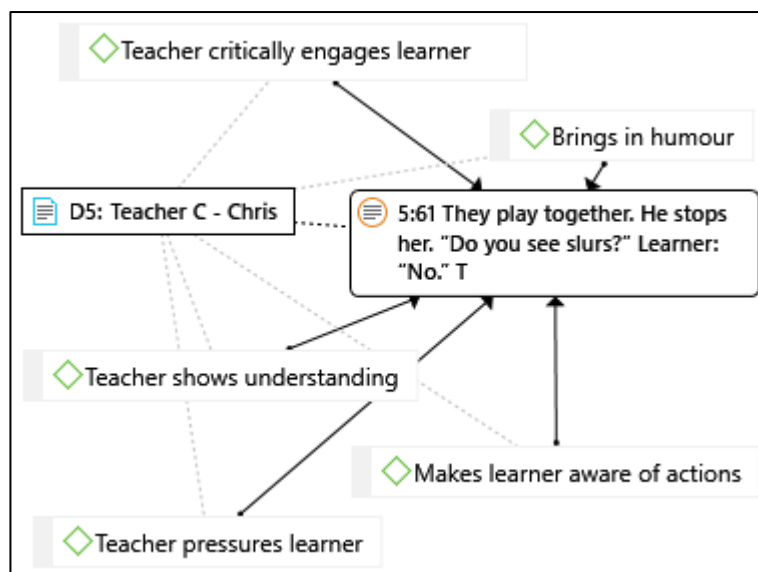
Figure 4-44_Chris_Slurs

Chris [stops L1]: "Do you see slurs?"
L1: "No."
Chris [in an acting way of make-believe surprise]: "Oh…you don't! Listen, you got ten out of ten for your sight-reading [exam], so I don't expect any mistakes from you [shaking his head; again teasingly; make-believe serious]". He laughs.
L1: "But the sight-reading was really easy!" She is also laughing.
Chris: "Yes I know, I know. I understand."

Although many positive codes were assigned to this example, it could possibly come across as pressure from Chris for L1 to play perfectly, despite the fact that she is playing a piece for the first time. It is possible that his jokes are misunderstood due to the lack of a relationship between him and L1. He made similar jokes with L2 (5:96), saying the people will want R50 back if she doesn't shift nicely, and she'll be a poor musician, and with L4 (5:154), saying "and no wrong notes, hey?". L2 and L4, however, feel related to Chris, and possibly understand his jokes in the light of humour.

Learner is feeling tense while playing and *Learner is feeling stressed* were associated with performance anxiety. L3 of Anne (2:18;2:23) wrote the following about what she enjoys least about her instrument: "Having to face the audience during live performances." She explains "for some strange reason, I tend to quiver only when performing an instrument. It baffles me …" L4 of Anne (2:25) said "I don't like doing exams or tests even though at the end I know how good I am I am I still feel (*sic*) shaky and stressed." It was also assigned *Learner feels stressed:* This tense feeling is specifically related to either playing in front of someone, or the fear of evaluation. L1 of Chris (6:39) also showed stress by describing practising as stressful. Surprisingly, the quantitative results for Pressure/tension (Figure 4-45) showed Beth and Chris to score the highest, while the examples came from Anne and Chris. It is possible that the examples from Anne's learners do not overpower their experience of their instruments, but is only one small aspect that they mentioned.

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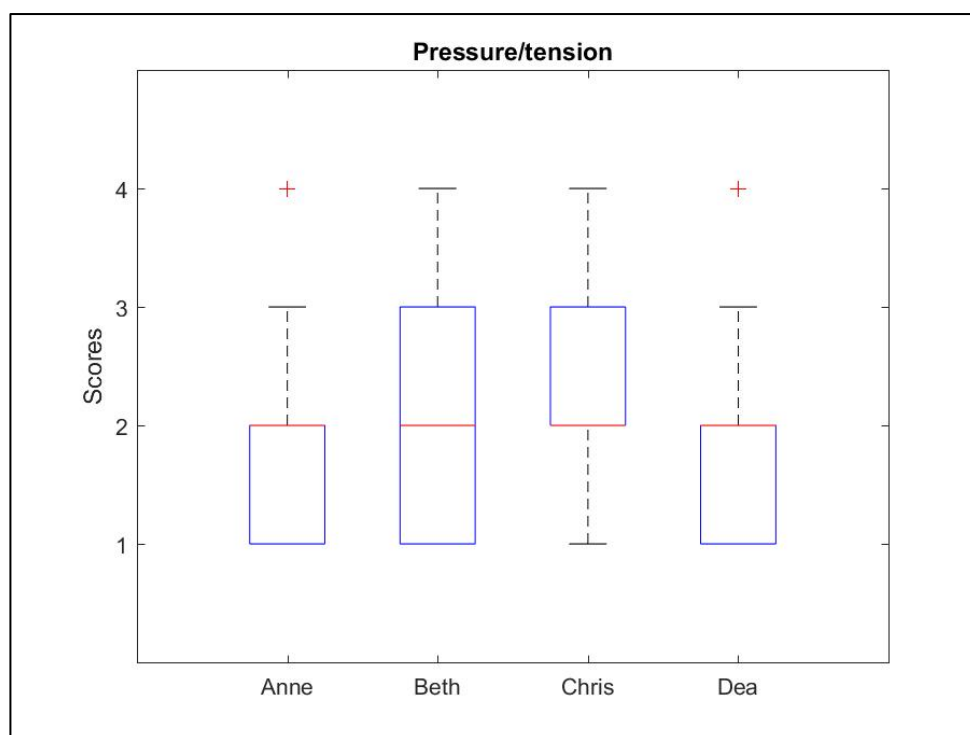
Figure 4-45_Pressure/tension

Learner is unhappy/indifferent refers to situations that do not contribute towards learners' enjoyment of their instrumental learning. L1 of Beth (3:50) pulled a disapproving face while she was playing technical things on the violin, and made discouraged sounds and faces while playing an exercise (3:80). The example of Beth's L2 (3:97), which has been discussed under other headings (see Figure 4-13), showed that L2 was unhappy to play something far below his level, thus offering no challenge (also coded *Offers no challenge*). The same learner (3:152) was asked by Beth whether something he is working on in his piano is going better, and he said "seker maar". Beth acted shocked or surprised by his answer. His answer shows indifference, which does not indicate enjoyment.

In conclusion, issues like boredom from doing the same things over, and playing pieces which one does not always like, will not always be avoidable, and if one is to continue enjoying music lifelong, it will remain part of music making. To overcome a manageable and optimal challenge, one has to practise something more than once, and if performing, one will have to perform the same repertoire for extended periods and keep doing it convincingly. If someone is to enjoy music making as part of a choir, ensemble, orchestra or band, one will not necessarily have full control over choice of repertoire, and will also have to perform a repertoire that one is less enthusiastic about. It is therefore not an aspect of instrumental learning that teachers should try to avoid completely, but they can compromise at times. Repertoire or activities that learners do not enjoy, or that they are becoming bored with, can be varied with other pieces or activities that they do enjoy, without abandoning what has to be learnt.

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In time, learners will hopefully internalise these less enjoyable aspects of learning an instrument if teachers extend effort to support their basic psychological needs.

Feeling unhappy or indifferent will also surface at some stages of learning, although it impacts intrinsic motivation negatively. Teachers can support autonomy by acknowledging this and perhaps discussing those feelings. Performance anxiety is also shown to impact intrinsic motivation negatively, and therefore enjoyment. Teachers can perhaps relieve some of the tension by exposing learners to various means and genres of performance, like in ensembles, with a group of singers, as part of a popular music performance in a group, or improvising in a jam session. This can show them possibilities of how they can enjoy music in the future, and may make the high-level stress performance and evaluation situations more bearable.

4.5 Musical understanding

This was set up according to Elliott and Silverman's (2015) definition and different ways of musical thinking and knowing. SDT support alone is not sufficient for lifelong musical enjoyment, as learners need musical understanding to perhaps enjoy it fully, and to be able to continue practising music independently beyond the years of instrumental tuition. According to Elliott, musical understanding (previously referred to as musicianship) is "the key to lifelong musical enjoyment" (1995:134).

The specific codes for each way of musical thinking and knowing are presented under each heading. Table 4-17 indicates how often musical understanding, with all its ways of musical thinking and knowing is supported by all four teachers.

Table 4-17_Codes_Occurrence_Musical understanding

Musical understanding					
	Anne	Beth	Chris	Dea	Totals
Appreciative musical thinking and knowing negative	0	0	0	0	0
Appreciative musical thinking and knowing positive	3	1	0	1	5
Ethical musical thinking and knowing negative	1	0	0	0	1
Ethical musical thinking and knowing positive	2	0	1	0	3
Experiential musical thinking and knowing negative	2	2	0	0	4
Experiential musical thinking and knowing positive	18	51	20	23	112
Intuitive musical thinking and knowing negative	0	1	0	0	1
Intuitive musical thinking and knowing positive	9	3	5	6	23
Procedural musical thinking and knowing	0	2	0	0	2

negative					
Procedural musical thinking and knowing positive	30	66	23	166	285
Situated musical thinking and knowing negative	0	6	0	0	6
Situated musical thinking and knowing positive	19	33	47	36	135
Supervisory musical thinking and knowing negative	3	22	0	1	26
Supervisory musical thinking and knowing positive	17	11	12	40	80
Verbal musical thinking and knowing negative	4	5	0	0	9
Verbal musical thinking and knowing positive	19	28	6	6	59
Totals	127	231	114	279	751

4.5.1 Verbal musical thinking and knowing

The positive codes for verbal musical thinking and knowing are presented in Figure 4-46.
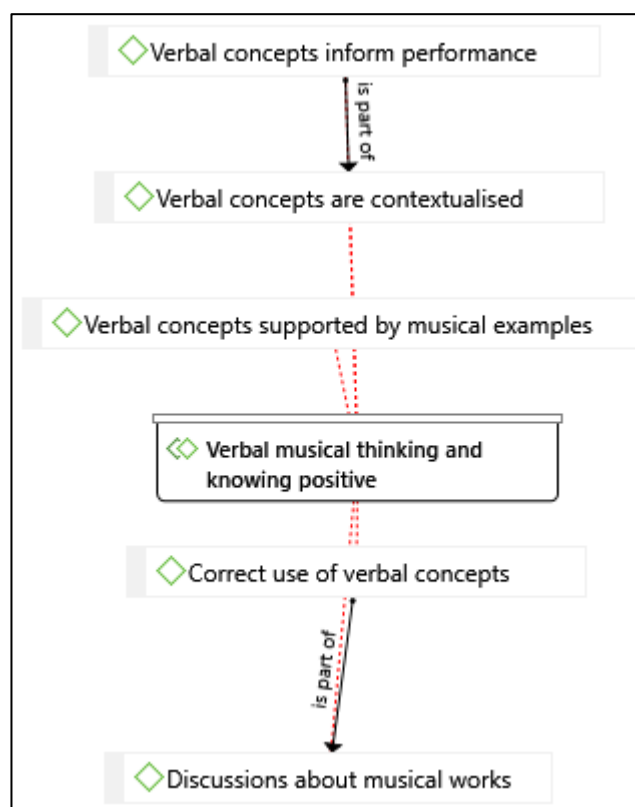
Figure 4-46_Codes_Verbal positive

Correct use of verbal concepts surfaced when L4 used wrong terms and Beth (3:277, Figure 4-47) corrected her. L4 told Beth about where she had previously used a fermata, and said it was a minim, and she held it for three counts, so it's just a note. Beth said that's right, but corrected L4 by saying a beat.

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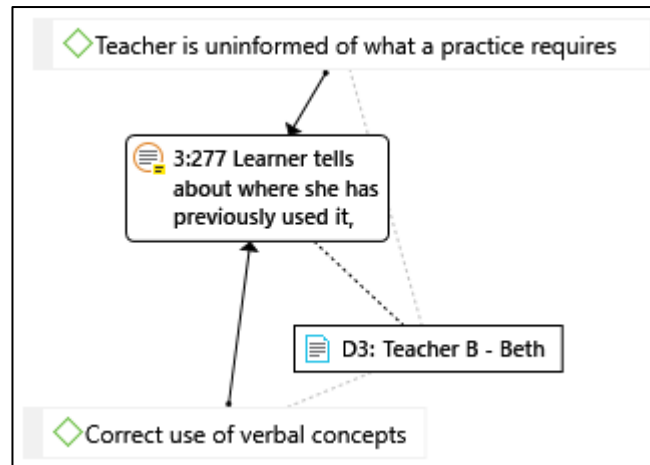
Figure 4-47_Beth_Verbal

The reason why this was also an example of a teacher being uninformed was that one cannot apply a rule to the duration of a fermata that will always be valid under any circumstances. Even if one would, it would not always increase the note value with a 'beat'; this would be relative to the note value.

Verbal concepts are contextualised came from Anne, Beth and Chris. It refers to examples where teachers make learners aware of when a familiar verbal concept appears in their music, and how to approach it in practice. It includes a concept about metre (simple triple time, 1:7), ties (1:19), note names (3:202), scale degrees (1:128;3:116;3:117), syncopation (1:227), analysis of music (3:143), and a fermata (3:276). Anne (1:123) asked L3 to name what A major has in its key signature, and to name it in order. Then Anne said it ends at G sharp, because G sharp is the leading note of A major. This additional information that Anne provided places the G sharp within the context of scale degrees, and thus explains why it is part of A major's key signature. Chris (5:54) had an example when he said to L1 she has to go back and show him what a staccato looks like in the music.

> Chris: "Where did you see staccato?" He shows her the dots on the notes when she still remains uncertain.
> L1: "Does that mean staccato?"
> Chris: "That is staccato."

L1 learnt to play a scale staccato just before this, and Chris now showed her how it is indicated in the music. Another example by Chris (5:121, Figure 4-48) was also discussed under *competence positive*. L3 played whole tones in the wrong places in her violin scale, and Chris let her do the same scale on piano (which she previously played and knows). This demonstrated to her where the semi-tones are, and after that he asked her what one needs to do in violin to play a whole or semi-tone. He thus placed the concepts within the context of the violin. It was also assigned *Facilitates problem solving,* as he made L3 find the answer herself.

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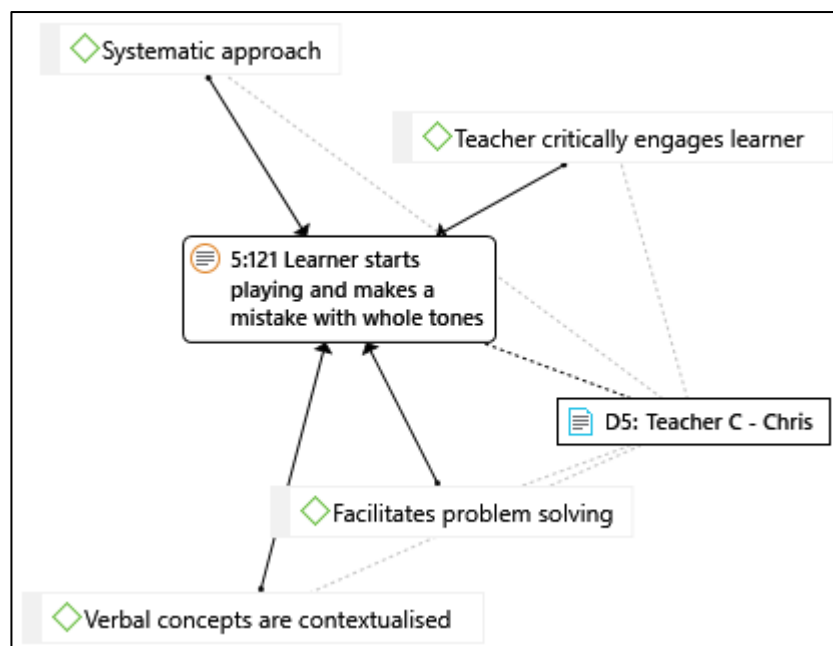
Figure 4-48_Chris_Contextualised

Verbal concepts inform performance occurred frequently, and across all four teachers. It refers to teachers using a verbal concept to help learners with how they play something. For this code and *Verbal concepts supported by musical examples,* Anne (1:103) had an example shown in Figure 4-49.
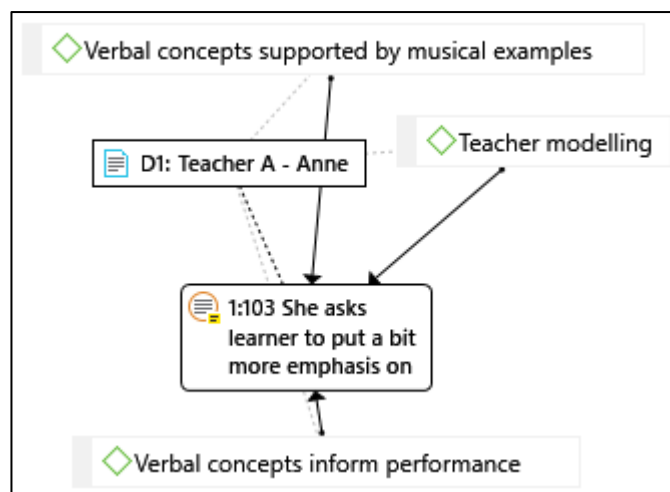
Figure 4-49_Anne_Example

She also sang the notes to demonstrate the emphasis. It is appropriate that the teacher models by means of singing, as a Romance is song-like in nature. The example was therefore also assigned *Teacher modelling.* She possibly feels that she cannot effectively convey the meaning of a term in words, and therefore demonstrates it through singing. That is appropriate, as music is essentially non-verbal. Other examples for both of these codes include Beth (3:87) playing a glissando on the violin to L1, and saying "it's a glissando, listen", and then she played it again. Beth (3:100;3:106;3:168;) also asks her learners to name the accidentals before playing a scale, and then they have to find it and play

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them on the piano. Anne (1:232) also spoke about the melody being embellished, and played it. Beth (3:392) told L6 that she is playing detached, and then she demonstrated what detached sounds like. Chris (5:66) showed L1 accents in her music (which she did not know before), then he demonstrated it in speech, and then on the violin. Dea (7:357) asked L4 about a dotted note, then demonstrated how long it should sound by singing and counting out.

Negative codes for verbal musical thinking and knowing are shown in Figure 4-50.
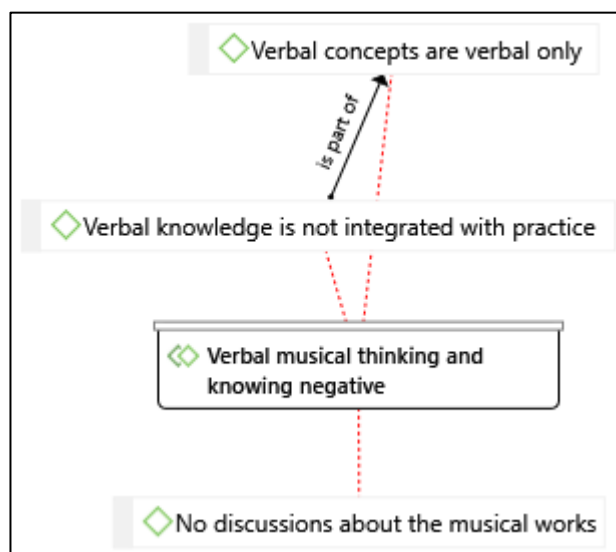
Figure 4-50_Codes_Verbal

Only two examples came from *Verbal concepts are verbal only.* Anne (1:120) explained to L3 the rule of working out the relative major key and wrote it on the board. She said first you have to count three letter names up; then to know precisely, count three semitones up from F sharp. L3 worked it out. Anne: "So who's the daddy? A major." This verbal concept of relative major could have been demonstrated on an instrument, by finding and playing a minor third above the F sharp. In the same lesson, Anne (1:124) asked what else they need to work out. L3: "Accidentals." Anne: "But for what?" She said it is right, but what is that accidental; it's not part of the key signature. This is a concept that could be more easily demonstrated on an instrument, and the learner might have found the answer quicker if it was not de-contextualised.

Verbal knowledge is not integrated with practice refers to learners knowing verbal concepts about music, but not being able to apply it effortlessly in practice. When Anne (1:203) asked L5 to play F major scale on the recorder, L5 asked "with a B flat?" Anne: "With a B flat, please." L5 played and at first missed the B flat; then immediately corrected herself. L5 was not certain whether she had to play a B flat, while it is the key signature of F major. L5 (1:210) also talked about a B, when it was B

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flat, also showing that perhaps she does not view a flat as an entire different note from its letter name, but as a slight alteration to the note of the letter name. L1 of Beth (3:86) also provided an example, when she incorrectly played in a major key while it should have been minor, corrected it with Beth's help, and then remarked that it sounds different. Beth said, "it's minor". L1: "So?" Beth: "That's why it sounds different." Beth contextualised the concept of minor within a piece that L1 played, therefore it is also *Verbal concepts are contextualised*. L1 however did not recognise it as such; thus, verbal concepts are not integrated with practice for her yet. L2 of Beth (3:111), when asked, said that his fourth finger should be on B flat in A major, to which Beth responded there is no B flat. Beth (3:181) asked L3 what the notes were for B flat major arpeggio, and L3 started off by saying B. Beth (3:354) helped L5 with a written instruction in her piece, which meant an octave lower. After she had said this, L5 played in the same place, showing that she did not immediately realise the practical implication for a verbal concept that she knows. L6 of Beth (3:440) had the following example:

> Beth stops L6 and asks what the first note is.
> L6: "G."
> Beth: "No."
> L6: "I don't know."
> Beth: "Look there."
> L6: "G sharp."
> Beth: "Thank you."
> L6: "I was gonna say G sharp, but then you made me feel like it was wrong."

L6's verbal knowledge is perhaps not yet integrated with practice for her, as she doubts whether it is a sharp, and is not sure where to find it.

4.5.2 Experiential musical thinking and knowing
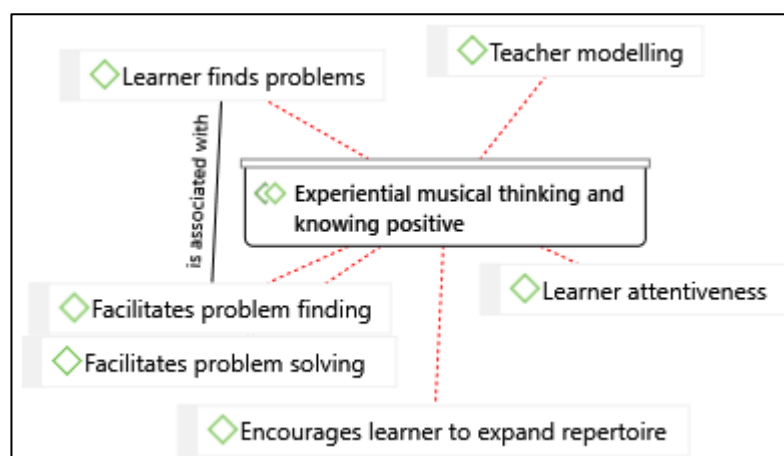
Figure 4-51_Experiential positive

Encourages learner to expand repertoire was supported by Anne (1:218) when she said to L6 she can learn the other pieces in the exam book that she likes, because they will not learn only three pieces the whole year. For *Facilitates problem finding,* Chris (5:175) asked L4 to show him which notes that she played were too high. L4 of Beth (3:228) was constantly entering too early with the CD accompaniment, but then she realised her problem. Beth simply asked, "problem found", and L4 said yes. She then said, "now you just have to correct it", and L4 corrected it. It was also assigned *Learner finds problems,* as L4 found what was wrong. The same learner also found (3:239) her problem at another piece when she also counted incorrectly before falling in. Anne (1:187) said to L5 "just check that thumb." L5 took the recorder away from her mouth to look at her thumb. Anne: "It's all I am saying, just check your thumb." Anne provided the appropriate amount of help to still let L5 reflect on why the note did not come out. Figure 4-48 shows how Chris *Facilitates problem solving,* by how he encouraged L3 to find the semi-tones. When L3 stumbled (she plays recorder), Anne (1:109) asked her what D sharp is the same as enharmonically. The following examples with the same learner also illustrates this (1:114):

> Anne: "Now let's try and get that E clear, so how are we gonna do that?"
> L3 plays the E clear now.
> Anne: "That's better; so, what did you do differently?"
> L3 answers incorrectly.
> Anne asks her to play again and see what she did differently.
> She plays and Anne points out what makes the difference and lets her do it again and then says she can carry on.

Anne encouraged L3 to discover the solution to the problem herself. When she found a solution, but could not verbalise it, Anne pointed it out. L5 of Anne (1:190) struggled with the descending of a scale, and Anne said, "just think your way through the scale". Learners finding problems came from all teachers, and was shown through learners noticing what they are doing wrong. L3 of Anne (1:91)

pointed out her mistake and played again. L6 of Beth (3:436) commented on her F that did not sound good on the violin. L5, a boy who plays the saxophone with Dea (7:417) said "I realise what the problem was. I was holding the [inaudible] down on the A and not on the D. It was too tight for too low and too loose for too high." He also said he is trying to figure out whether it's a G or an F (7:440).

Learner attentiveness came from Anne, Beth and Dea. It was signified by learners making the necessary preparations before starting to play, counting out loud for themselves, singing, correcting themselves when a note is wrong or out of tune, or hearing and saying when something sounds wrong. *Teacher modelling* occurred often and came from all four teachers. It took the form of modelling what something should sound like, the right technique on the instrument, what a technique should look like, in some cases showing why a technique is wrong, or sometimes by singing musically, or modelling an interpretive aspect. L3 of Anne (2:62) wrote that what she likes best about Anne that she "plays my new pieces before me". Beth (3:296, Figure 4-52) said to L5, before she goes on, there is something she sees all the time: she took L3's hand away from piano, and played staccatos, using only the finger playing the note for the action. She asked L3 if that was the right technique.
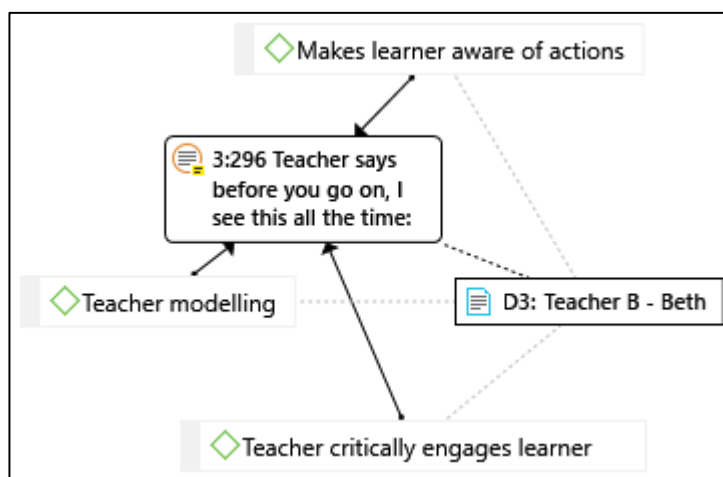
Figure 4-52_Beth_Modelling

In this case, Beth models the wrong technique, so that L5 can see what it looks like. As shown in Figure 4-52, Beth also makes L5 aware of her actions, as she shows her what she (L5) did wrong, and she engages her critically. Chris (5:23) showed L1 what a technique should look like:

> Chris reminds L1 of being relaxed and makes a few quick adjustments to her position again. He tells her to look at his hand and arm (making a violin position). "Do you see my arm?"
> L1: "Yes." She adjusts her position as she looks at Chris.
> Chris shows her "it's not like this [bowing arm too high], but not like this [too low]. My hand is straight. It's a 90-degree angle. Do you see a 90-degree angle?"
> L1 nods. She adjusts her position.

Anne (1:57) demonstrated playing with rounded fingers on the keyboard for L2. She also said to L5 (1:231) that she (Anne) will play something slightly differently than her (L5), and she asked L5 to listen for the difference. Anne then played some notes more staccato and accented than others, instead of articulating everything the same.
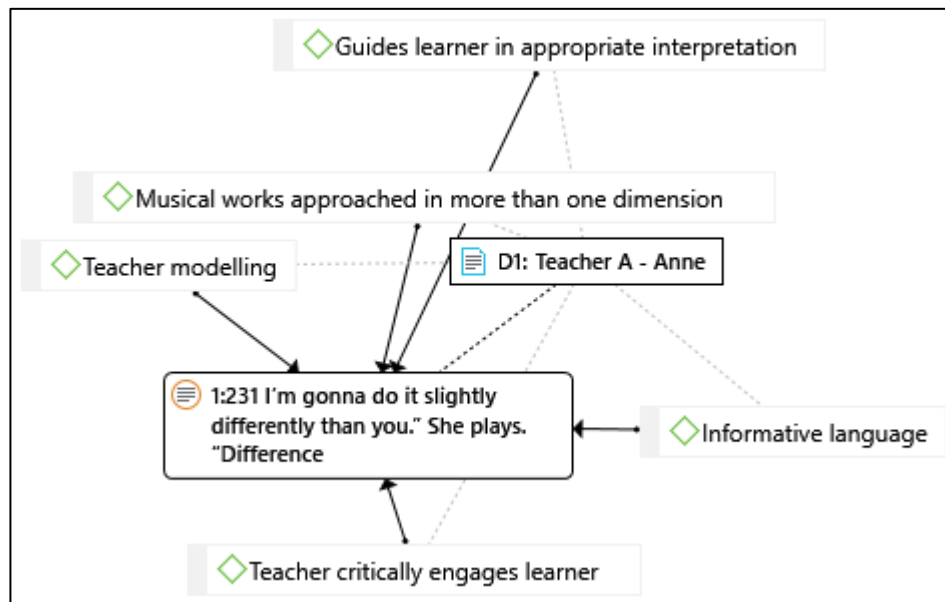
Figure 4-53_Anne_Interpretation

Figure 4-53 illustrates that this example also shows guiding a learner in an appropriate interpretation, which implies that the musical work is approached in more than one dimension. Not specific to any subtheme, Anne also engaged L5 critically, which may make the experience more valuable than if she would just have told her what she should do.
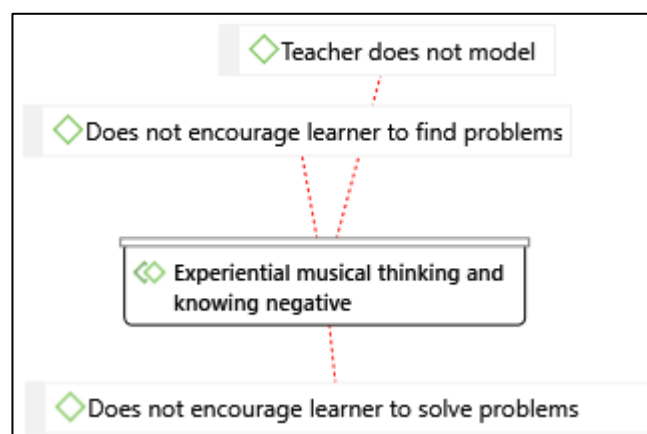
Figure 4-54_Codes_Experiential negative

Does not encourage learner to find problems can be seen when Anne (1:49) told L2 to count out the bound-over notes, "because that's what's straining you". Anne could have asked L2 what was holding

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her back, before telling her. That would have helped to develop problem finding and solving skills necessary for experiential knowledge. Also with L2 (1:58), Anne pointed to places in the music that were wrong. Anne made L2 aware of her actions, but did not encourage her to find the problem areas herself before telling her. L1 of Beth (3:21) played with slightly faulty intonation, but the correct finger pattern. Beth: "Not that high." Beth could have asked L1 whether that intonation was correct, or whether it was too high or too low. *Does not encourage learner to solve problems* could be seen when L1 of Beth (3:18) asked "what's different about this one [scale]?" Beth impatiently said "nothing!" Beth did not take the opportunity to let L1 solve the problem herself. It is presumably because she expected the learner to have known it by then, and therefore became impatient.

4.5.3 Situated musical thinking and knowing
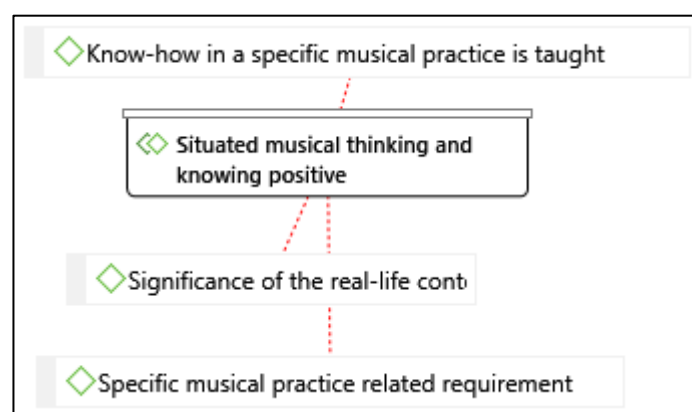
Figure 4-55_Situated positive

Know-how in a specific musical practice is taught occurred frequently, as all instruments in this study were viewed as musical practices: keyboard, recorder, violin, piano and saxophone. An example is when L4 of Anne (1:152, Figure 4-56) started paging to the next piece while the previous one was still ending. She giggled shyly. Anne: "You must get in the habit of keeping your hands there. Otherwise I will think that things are just happening by themselves. If only that was so." This refers to when the keyboard is playing an outro, and L4 should wait until it is completely done before taking her hand away. This is appropriate to keyboard playing, as the outro should still be treated as part of the performance. *Makes learner aware of actions* was also assigned, which will also contribute positively towards musical understanding.

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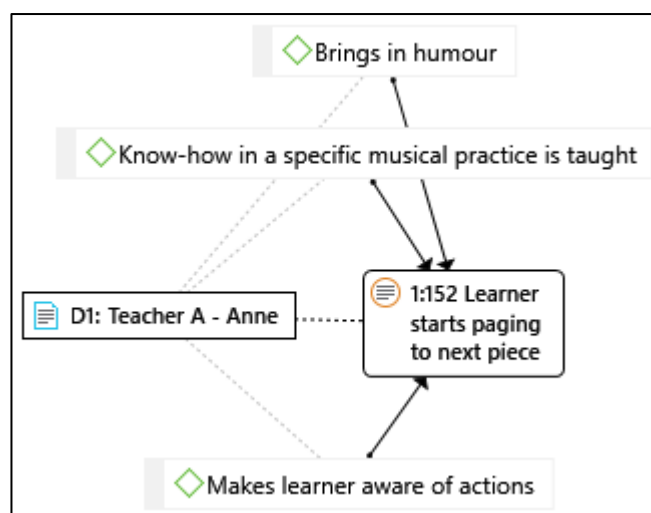
Figure 4-56_Anne_Know-how

The following is a recorder example where Anne (1:99) said to L3 "just be aware of your intonation on this note." She wrote something in pencil. Anne said she is making an arrow, because she feels that the tendency will be to play that note too sharp. "Just listen carefully..." In recorder playing, it is appropriate to listen carefully to intonation, as one can control this by means of embouchure. L4 of Beth (3:264) said she waited too long in one place in her piece (which is why it was also assigned *Learner finds problems*), to which Beth responded, "yes, but it is a breathing place, I will wait for you". In recorder playing it is also important to find sensible breathing places; preferably at the end of phrases. L6 of Beth (3:434) checked a G against the open G string, as it is an octave apart, so it is an indication of whether her intonation is right. This is an appropriate way of taking care of intonation in violin playing. Chris (5:21) said to L1 "then I want you to lift your violin". He told her that her shoulder and her head hold the violin. In between he said that she said she needed a new chin rest. "But not now, [while correcting her left-hand position again] with your next pocket money you can buy a new chin rest as well." It is an important principle in violin playing to not hold it with fingers and hands, so that those can move freely if necessary. The comment about L1 needing a new shoulder rest was assigned *Specific musical practice related requirement,* as one's instrument needs to be maintained. Beth (3:312) reminded L5 to have round fingers on the piano, and adjusted her fingers. Dea (7:388) said to L4, a piano learner: "let's start again, let's do it soft, firm fingertips". Dea teaches the correct technical skill to play softly effectively. It is also an example of *Musical works approached in more than one dimension,* as she includes dynamics and how to do it. Dea (7:420) also teaches saxophone, and she said to L5 "just careful on you low G, just listen to your intonation going too low". Dea played those three notes. She said, "when you go to the low one, don't relax too much". Intonation is important on the saxophone, and Dea helped L5 with how to pitch his lower notes correctly and effectively by using lip tension.

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Significance of the real-life context is acknowledged could be seen in the following example where Chris (5:106) makes sure L2 approaches an upcoming assembly playing opportunity like a real-life performance:

> Chris: "[…] but when you end, you have to end."
> L2 plays the ending again.
> Chris [gets his violin]: "When you want to keep the audience captured."
> L2 plays again.
> Chris: "No, when you end you got to end."
> He demonstrates how it should be by playing an upbow and keeping his bow in the air. He says something inaudible, because L2 was playing when he spoke. He says L2 is going to end on an upbow. Chris plays the last few bars now. At the end, he keeps the bow in the air a few seconds and then breathes out.
> L2 plays the same part now, and at the end, Chris lifts up his arms, and says "in the air".
> L2 lets her bow arm fall down soon after the ending.
> Chris: "You wait there, you wait [keeping his hand in the air], look at everybody, and then, I will say yeeeees! [in a smug roaring voice]".

Specific musical practice related requirement refers to anything not directly related to the music itself, but which is important in the practice. Anne (1:53) made a comment about L2's nails which were too long for keyboard playing. This does not relate directly to musical understanding, but is something that is required to play this specific instrument. Beth (3:299;3:321) reminded piano learners to keep their feet flat while sitting in front of the piano. She also reminded L5 (3:375) to relax her violin. Chris (5:48;5:5:57) reminded his learners to have a good posture while playing violin. Dea said to L2 (7:117) he must clean his saxophone, which he did by sucking, and L5 (7:415) adjusted his reed on the saxophone when he struggled with sound.
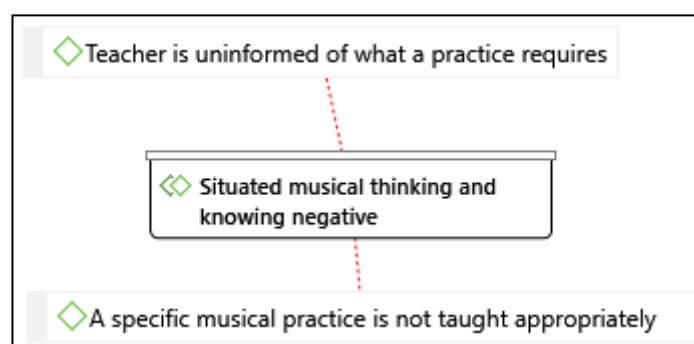
Figure 4-57_Codes_Situated negative

A specific musical practice is not taught appropriately is shown in the following example by Beth (3:19) with L1:

> Beth: "It's the same as D."
> L1: "You said there's something different."
> Beth: "No, it's exactly the same. [Beth pages to D major.] You just start one note lower and end one note lower."

> L1 plays and makes a mistake.
> Beth: "No, there's no F sharp." She moves L1's left hand around slightly, while saying the note names of the fingers that she is touching on L1's hand. "Start again from the C."

It is understandable that Beth made an association between the two scales, as those two shift to the same position. Saying they are exactly the same, except for starting and ending on different notes, is however not accurate, as the different key signatures are thereby not acknowledged. That may be why the learner incorrectly played an F sharp that the teacher corrected. This can also lead to the kind of thinking in string playing in terms of hand positions without awareness of notes. In the same lesson (3:20), Beth made a 'no' sound and shook her head. "Now you're playing an E flat." She told L1 that it is her normal position: far-close-far. In this case, it was only a word-choice that was inappropriate to the musical practice. Position in string playing implies where on the string one plays a passage/note (first position, second position, etc.). What the teacher was referring to was the placement of the fingers in relation to each other. It would have been more appropriate to refer to it as pattern. Beth however possibly knows this, but did not notice that she said it wrong. It can cause confusion for a learner.

For *Teacher is uninformed of what a practice requires* there was the following example from Beth (3:373):

> Beth: "How's your tuning?"
> L6: "Normal, hopefully."
> Beth: "Let's try."
> They play their strings one by one together to hear if it sounds the same. Then she asks L6 to play two strings together. When L6 plays D and G together, Beth asks her to do it again. She then plays the G on the piano, and asks L6 to play just the G. "Go up".
> L6 stops to turn the fine tuner, and then listens again.
> Next is E, then E and A together. Beth says, "that's good".

It is good that Beth teaches L6 to be able to tune her own violin, as it is a requirement for the practice of violin playing. It was therefore also assigned *Specific musical practice related requirement.* It is, however, important to do that before starting to play, and in this case Beth only checked it later in the lesson when a note sounded out of tune. L6 was also touching other strings accidently while playing, which Beth (3:395) assessed incorrectly: "I think you need to control your bow." L6: "Yeeah." Beth: "Bow a bit harder." Even though the problem is related to bow control, the solution is not to add pressure, but to adapt the angle of the elbow, as Beth correctly said earlier in the lesson. In this scenario, she was unable to correctly identify what was required. When uncertain of what the problem is, it can also be helpful for a teacher to play on the learner's instrument and find out if it is particularly challenging on that specific violin, as there are slight differences between different violins.

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4.5.4 Intuitive musical thinking and knowing
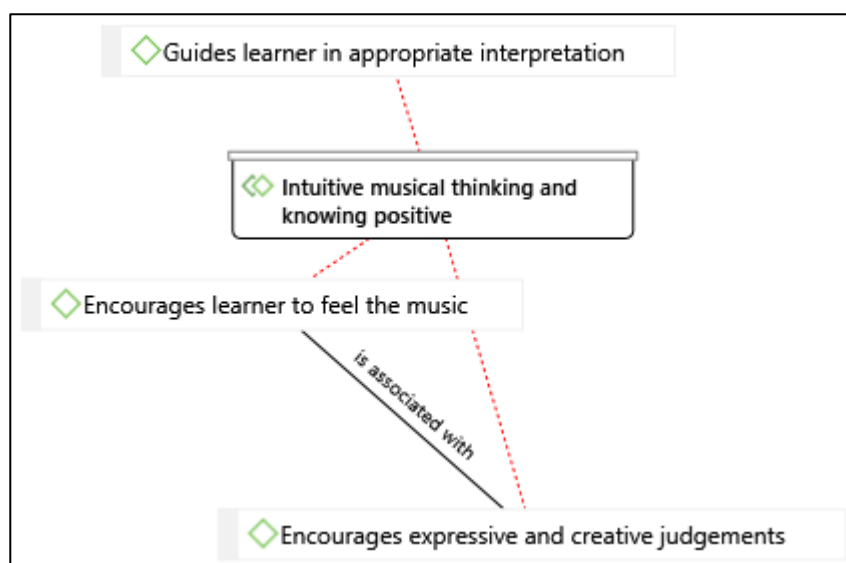
Figure 4-58_Codes_Intuitive positive

There were three examples of *Encourages expressive and creative judgements,* from Anne, Beth and Chris. The following example was taken from Anne (1:93) with L3, a recorder learner:

> Anne asks where L3 thinks the high point is in that phrase; the most passionate part.
> L3 says the high C, doubts whether the note is a C, but Anne confirms.
> Anne asks her to play again and see if she still feels the same way about the C.
> Anne asks her to put that emphasis on the B after the C; not much louder; tells her that she played the C beautifully; she should now do that for the B instead and hear the difference.
> Anne: "Which one do you prefer?"
> L3: "The second."
> Anne: "Then, how do you think we should end-off that phrase?"
> L3: "Lightly and softly."
> Anne: "Exactly, let's try."

Anne encouraged L3 to make the judgement herself, after presenting the options available. Beth (3:213) asked L3 to look at her piece at home, and at which techniques that she learnt she can apply to the piece, and tell Beth next time. Chris (5:98) told L2, before she started to play, to "bring some life into it. Bring life into Mozart; Mozart is life." This can be seen as an inspirational comment, meant to inspire L2 to interpret the piece according to the idea that it should be full of life.

Encourages learner to feel the music, which will help learners to develop a "knowledgeable feeling" (Elliott & Silverman, 2015:223) for interpretation, was assigned to two examples by Anne. She said to L5 (1:237) that she wants her to feel "the end of every shorter phrase". Feeling this will help learners to make an informed judgement about interpretation. After L5 attempted to feel the phrases, Anne (1:241) said the following:

> Anne: "Okay, the feel of that was better. Did you hear that?"
> L5 nods.
> Anne: "Did you feel where the music was going to?"
> L5 nods.

This example was also assigned *Makes learner aware of actions,* as she made L5 aware that the feel was better, that L5 did something which yielded a desirable result. She made sure that L5 also felt it.

Guides learner in appropriate interpretation occurred frequently, and refers to situations where teachers give more instructions, and leave less to a learner's own judgement, but can be seen as necessary while learners are still developing their musical intuition. It often includes following the indications which are written in on the music, and sometimes what the teacher feels it should be. Anne (1:89) told L3 the piece she will play is an arrangement, and "sometimes we can change arrangements, but let's first learn it the way it is written". She talked through the slurs and tongued notes throughout the piece. She asked L3 to play the first phrase as beautifully as she can. The example was also assigned *Discussion of context,* as Anne explained that it is an arrangement, and therefore more flexible in interpretation. This supports Ethical musical thinking and knowing. Anne said the following in the same lesson (1:118): "It's a long piece, molto legato." She said L3 should simply play it intimately all the way through. "Have you been able to locate this on YouTube?" Anne guided L3 in the overall character of the piece. Listening to other recordings or versions of a musical work that one has to perform, can inform the interpretation.

Beth (3:216) said to L3 she must play it (her piece); donkeys are not "pieperige" animals that (and she gently played in the air and made a soft sound with her voice). Beth guided L3 in interpreting the piece appropriately according to the title (donkeys), which implies that it is a character piece. It was also assigned *Musical works approached in more than one dimension,* as Beth paid attention to the interpretive implication for the title, and did not only focus on technical details. Chris (5:100) made swaying movements with his arms to convey the feeling of the second section of a piece, which was contrasting (more melodic and legato) to the first section. It is also an example of approaching a work in more than one dimension – with an instrument like the violin, which has many technical challenges, it is easy to overlook interpretive aspects, but Chris still viewed conveying the feeling as important. Dea (7:220) said to L3 and her duet-partner "now a bit louder" (as they came to the second time they played that section). When they finished, Dea whispered something again. Dea said: "Don't start too soft, softly enough, but with control and here you go a little bit louder, until there, so that you can go softer towards the end".
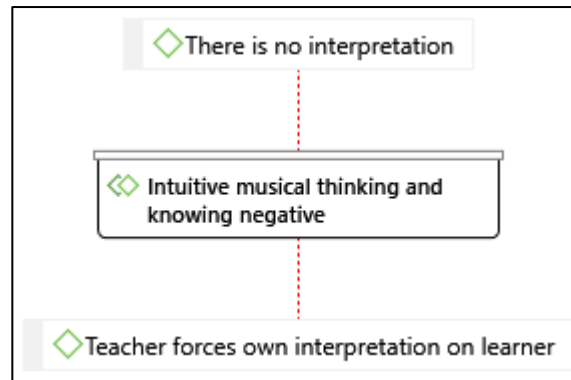
Figure 4-59_Codes_Intuitive negative

There was only one weak example of *Teacher forces own interpretation on learner,* as the teachers in the study mostly followed the indications on the music strictly, which cannot be viewed as their own interpretations. These are mostly expected to be followed strictly in board exams. This interpretative issue will possibly only become prominent at a more advanced stage of instrumental learning; when works are performed which many performers have interpreted differently, and a teacher has their own idea of how it should be, which they force upon their students. The example was when Beth (3:271) told L4 that it will sound nice if they put a ritardando in at the end of the piece to be performed at the concert. Even though this is a standard interpretive practice to do at the end of a piece, Beth could have asked L4 what she thought they could do to make it sound nicer, so that she could have thought about interpretation. If she did not reach that conclusion on her own, Beth could perhaps have suggested it and asked whether she agreed, and why, and shared why she (Beth) wanted to slow down at the end.

4.5.5 Appreciative musical thinking and knowing
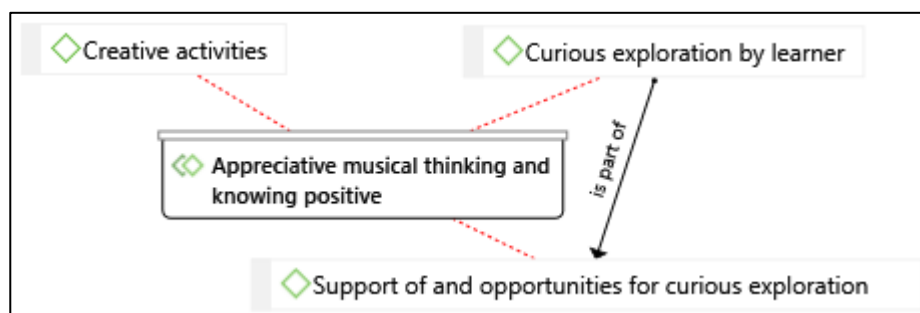
Figure 4-60_Codes_Appreciative positive

Creative activities could support appreciative musical thinking and knowing, but it did not yield any results in the observations. It seems as though teachers lack in this area, although one cannot say for certain that it never happens, as these observations were only of one lesson per learner. It could also be that creativity is supported in other music classes, like class music, ensemble playing, theory, or aural.

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Curious exploration by learner could be seen in the following comment by L4 of Anne: "The things I enjoy most about playing my instrument is that I can try different things." The fact that she gets opportunities for this implies that there is also support or opportunities for her to explore; either in her lessons, or at home during practising. For other examples, see Intrinsic motivation positive under the same codes.
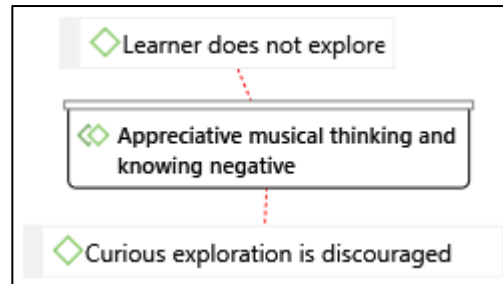
Figure 4-61_Codes_Appreciative negative

There were no negative examples of Appreciative musical thinking and knowing; perhaps partially as it is hard to tell whether learners do not explore, as exploration often happens at home. When they did explore in their lessons, no teacher actively discouraged it; nor did they particularly acknowledge it. It could perhaps be the right thing not to say or do something, as it may take away the spontaneity of the exploration.

4.5.6 Ethical musical thinking and knowing
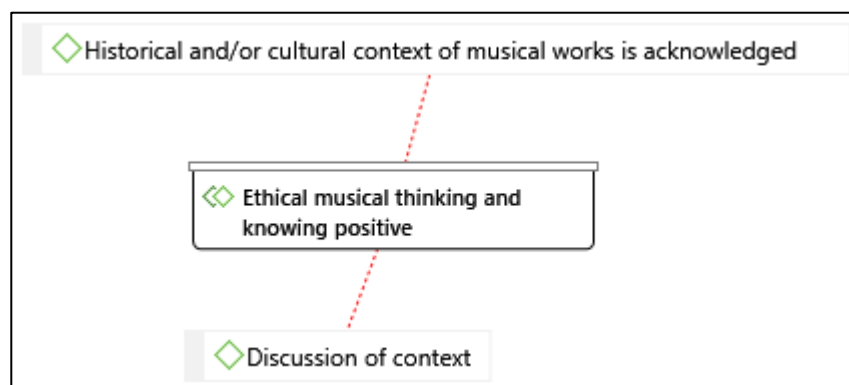
Figure 4-62_Codes_Ethical positive

Discussion of context could be seen when Anne (1:213) told L5 that her piece is from a musical, and she should listen to the YouTube version and compare the real version with her version. The following example by Chris (5:102, Figure 4-63) refers to acknowledging the historical and/or cultural context of a work:

Chris: "[…] Mozart wrote for the queen, you know we talked about that, and the queen walks in [making a hand motion like in prayer and a slight bow], and the people goes [sings the melody of the piece and dances. He then starts dancing with L2 while singing, and she goes along with it while smiling.]"
He stops now, and says "okay"; L2 makes a yes sound and nods.
Chris: "So keep it nice and lively and dance-like court-like, you know".
L2 starts playing, while Chris corrects the violin position, and continues, "don't play like the people on the street, you know". He laughs. He stands back again and learner plays. "You're in the palace now".
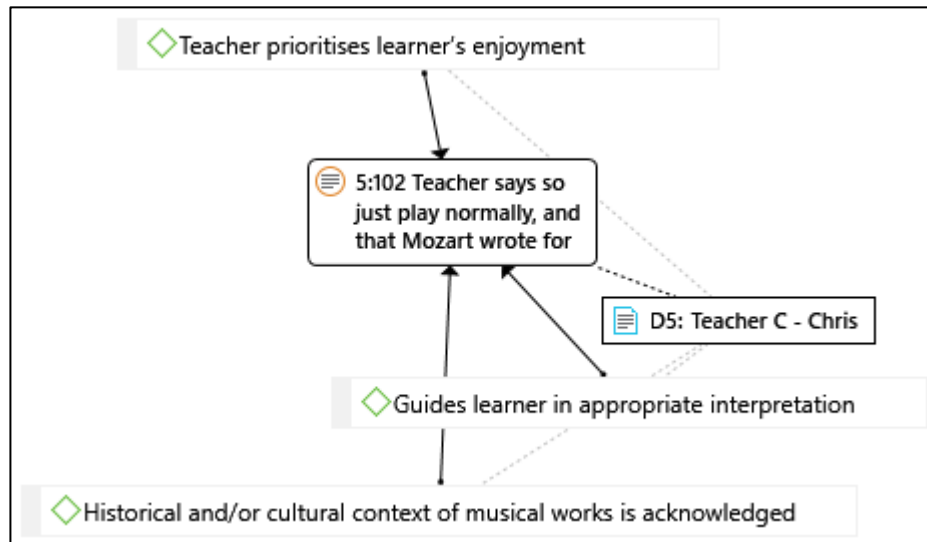
Figure 4-63_Chris_Context

It was also an example of guiding a learner in an appropriate interpretation. Chris acknowledged the historical background of what purpose Mozart wrote for, and the dances that went with this context of the palace. He brought it to life for L2 by recreating the scenario and dancing with her.
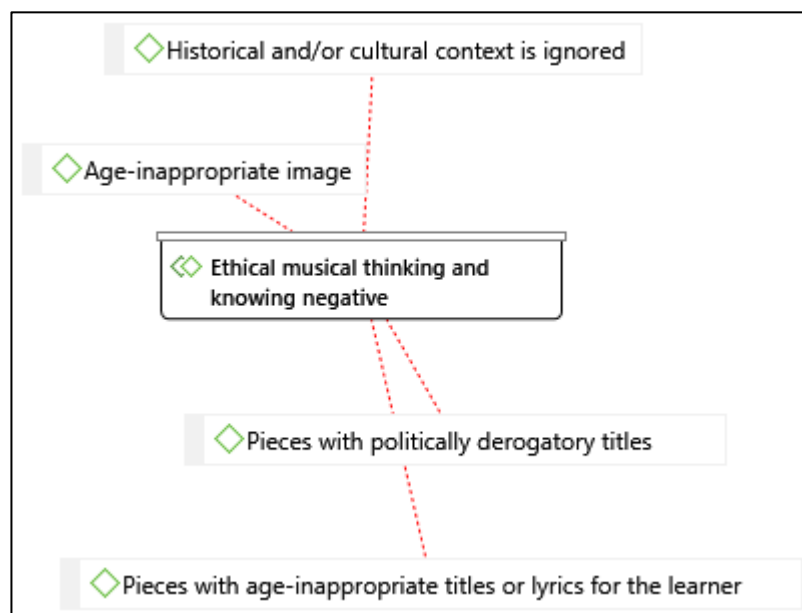
Figure 4-64_Codes_Ethical negative

There was only one negative example of Ethical musical thinking and knowing, *Age-inappropriate image*. It was in the following example by Anne (1:90): "This is a romance. I know you haven't been there yet, but imagine the two walking on the beach." As an instrumental Romance does not necessarily denote romantic love, it seems unnecessary to create such an image for a primary school learner to imagine. Anne rather could have created an image about something that is relevant to L3, and that she feels sentimental about, which is what a Romance is about.

The fact that the other codes did not yield results does not mean that it never happens, but it could not specifically be seen in these lessons. *Historical and/or cultural context is ignored* could not be assigned, as most of these learners were not in the beginning stages of learning a work, but knew it already, or had had a lesson on it before. One can therefore not tell whether the context was or was not been discussed.

4.5.7 Supervisory musical thinking and knowing
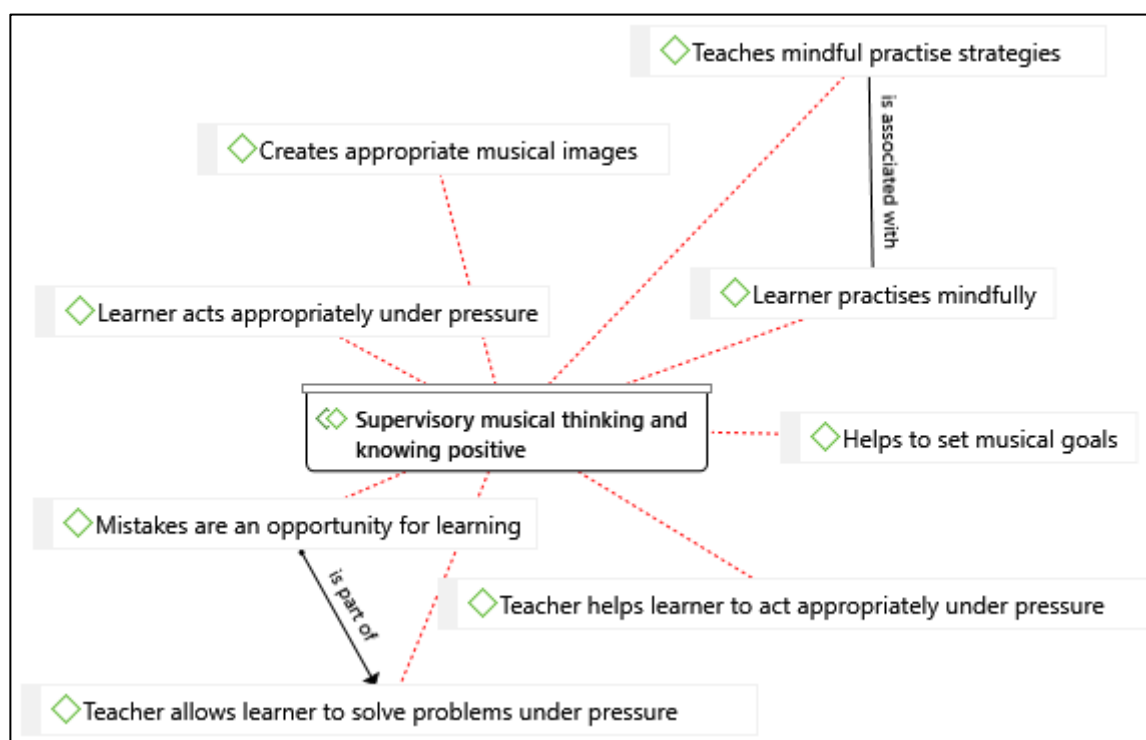
Figure 4-65_Codes_Supervisory positive

Creates appropriate musical images was assigned to Anne (1:127) when she drew a picture of a house on the board, and said there is a little front porch step that leads to home, the tonic; note seven going to note eight. This an appropriate image that illustrates the relationship of the leading tone to the tonic. Anne also said note seven going to note eight, which makes more sense in this context than saying seven notes from the tonic. Other examples were Anne (1:238) saying a phrase is like a musical

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sentence, Chris (5:35) comparing down bows in violin to pouring a cup of tea, and the bow angle to 90 degrees (5:37). Chris (5:66) also compared accents in music to accents in speech, and he used a spoken example, and called a slight 'stop' between two notes a choke, and made a throat-cleansing/coughing sound (5:150). He also compared getting stuck in music to robots (5:162).

Helps to set musical goals came from Anne and Beth, and refers to teachers setting goals for the learners for when they practise, or long-term goals. Anne (1:255) said to L5 that she wanted her to play her pieces "really beautifully". Dea told learners to work on fluency for Tuesday (7:97), try to memorise scales (7:104), work on speed (7:160), continuity (7:162), practise the repeat (7:163), keep it smooth when L2 practises over the holiday (7:179), "once the notes are secure, do it a little bit faster" (7:349), and to practise slowly hands together, keep it steady, and add dynamics when the notes are secure (7:406).

Learner acts appropriately under pressure came from Beth, Chris and Dea. It refers to when a learner can continue despite a mistake to maintain continuity, like one would need to do in a real performance, quickly correcting a mistake without stopping, or to be able to start at a particular point in the music again instead of starting from the beginning after a mistake. L2 of Beth (3:141) made a mistake and showed Beth where he would start again. L3 of Chris struggled with bow control (bow got finished too quickly on the long notes), but she continued. L4 of Chris (5:171) played her first finger too high, but pulled it back to correct it while continuing to play. Dea's (7:230) duet pair played together, one made a mistake, but Dea allowed them to continue, and they fixed it. It was therefore also an example of *Teacher allows learner to solve problems under pressure.* The latter was assigned to all instances where teachers do not intervene too soon, but allow learners to continue despite mistakes, give them permission to do so, or wait for them to fix a mistake themselves. It came from all four teachers, and occurred often. *Teacher helps learner to act appropriately under pressure* was also well represented by all four teachers. It goes further than just allowing, by helping learners to solve problems when they are incapable of doing so. Anne (1:79) alerted L2 to the fact that she was not used to starting at a particular spot in the music, "get your brain around that". Being able to start at any place in the music is part of developing the skill of acting appropriately under pressure while making music. This is especially appropriate in the light of an upcoming performance; in this case, an exam. Beth (3:242) had the following example with L4:

> Beth says go on, and she reminds L4 of the upcoming repeat. She points to the music at a certain point. L4 stops and says "ek weet nie waar ek is nie!".
> Beth shows on music, "daar". She says "weer" for a repeating place.
> L4 stops. "Ek's verdwaal."
> Beth points to where in the music L4 is.
> L4 catches up again and plays to the end.

Chris (5:65) showed L1 where they would go from again after she had made a mistake. Dea (7:403) simply pointed to the music when L3 made a mistake, and L3 corrected it.

Learner practises mindfully was assigned to Anne's (1:60) L2, who practised a small part a few times over while Anne was talking to someone, and when Anne returned, the problem was fixed. *Teaches mindful practise strategies* can be viewed under competence positive. *Mistakes are an opportunity for learning* was assigned to Anne (1:28) when she did not want L1 to take the tempo down, as she wanted to hear where she gets stuck. The same learner said that she enjoys the following most about her lessons (2:38): "Is that I know I can practise and make mistakes because I am learning." The fact that L1 feels safe enough to make mistakes may tell one something about Anne's attitude towards learning – that mistakes are an opportunity for learning to take place. Chris (5:124) had the following example with L3:

> Chris: "Did you enjoy playing wrong?
> L3 laughs. Chris also laughs.
> Chris: "You must enjoy playing wrong as well so you can know what to fix. It's so much fun to fix it then. You will always be… [makes a smug sound and pretends to be playing in the air with his left hand] "Mommy this is right!".
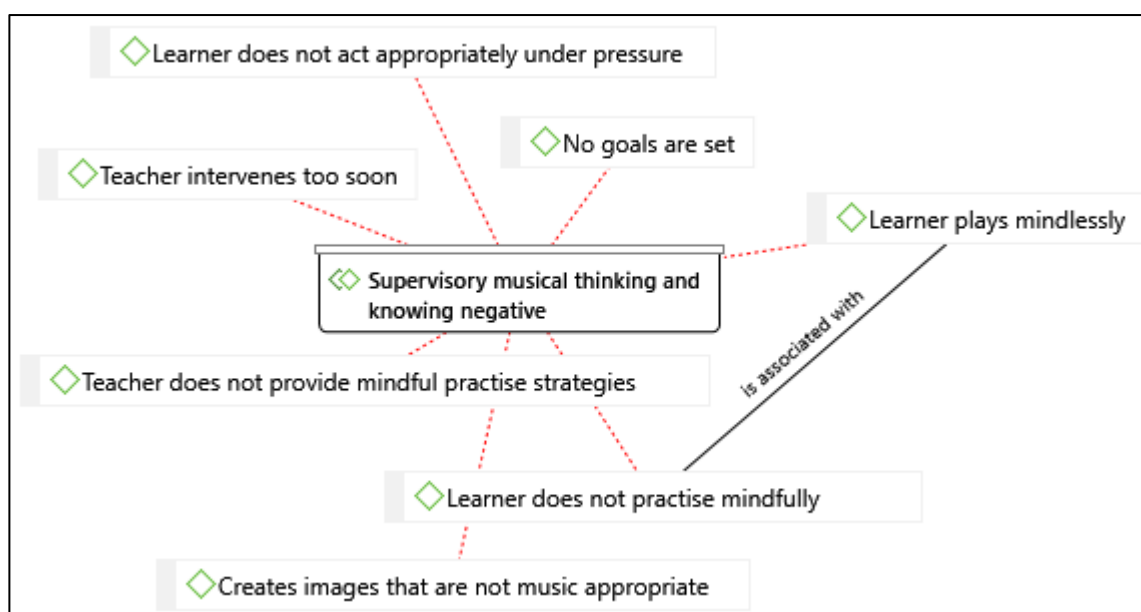
Figure 4-66_Codes_Supervisory negative

For *Creates images that are not music appropriate,* Anne (1:122) asked L3 to name key signatures and said the rhyme for sharps to help her. Although rhymes are a way to recall the sharps in the order that they appear, it is not a musical image that informs musical understanding. It is removed from musical sounds, and is thus mere symbol decryption. *Learner does not act appropriately under pressure* refers to when a learner is playing something for the teacher, and cannot solve a problem under pressure, and stops playing for instance. L4 of Beth (3:240) stopped playing, and swept her

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recorder through the air when she played a wrong note; that was in the middle of her attempt with CD accompaniment, and it was a piece that she had played for a while. Five similar examples also came from Beth. L5 of Dea (7:424) said "huh?" when he made a mistake.

Learner does not practise mindfully was assigned to a comment by L1 of Anne (2:57), where she wrote that sometimes her teacher thinks she does not practise when she does, "[b]ecause sometimes I don't practise properly at home". This means that supervisory musical thinking and knowing is not always at work in L1 when she practises. It confirms that the reason for Anne thinking L1 did not practise is most likely that L1 did not practise mindfully. Anne could possibly have used instances like these as opportunities to discuss, demonstrate and let L1 try out mindful practise strategies. She could open the discussion by, for instance, asking a non-threatening question like "how did you practise this passage/piece at home?"

Learner plays mindlessly refers to when learners cannot recall or tell why they did something the way they did it, or did not attempt to attend to something a teacher said. Beth asked L1 (3:72) why she kept playing fourth finger at a certain place in the music (in violin that is equivalent to the wrong note). L1 responded with "I don't know!". This shows that she did not reflect on her mistake; therefore, she also kept doing it. The same learner (3:85) incorrectly played an F sharp, and Beth asked her why she did that, whether she was supposed to play an F. L1 responded by saying she was just guessing. L2 of Beth (3:164) could not tell Beth what he thought of his attempt, and when she asked why he wasn't thinking anything, he said something about it not being in his mind. When Beth's L5 (3:357) played notes shortly, Beth asked whether they were staccato notes, and L5 kept playing, without making a significant change.

The fact that many examples came from Beth's learners, could be because *Teacher intervenes too soon* also came mostly from Beth. It refers to instances where a learner has the necessary knowledge to correct their own mistake, but a teacher helps them too soon; also, when a teacher does not temporarily overlook a mistake for the sake of helping a learner maintain continuity. When L5 stumbled, Anne (1:197) for example said the note names. As they had already spoken through the notes, L5 had all the information to fix the mistake by herself, and may have deepened a part of her musical understanding in the process of struggling slightly. Beth (3:108) intervened similarly while L2 was playing and sometimes stumbling. Despite Beth's intervention, L2 continued playing until the end; therefore, it was also an example of *Learner acts appropriately under pressure.*

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4.5.8 Procedural musical thinking and knowing
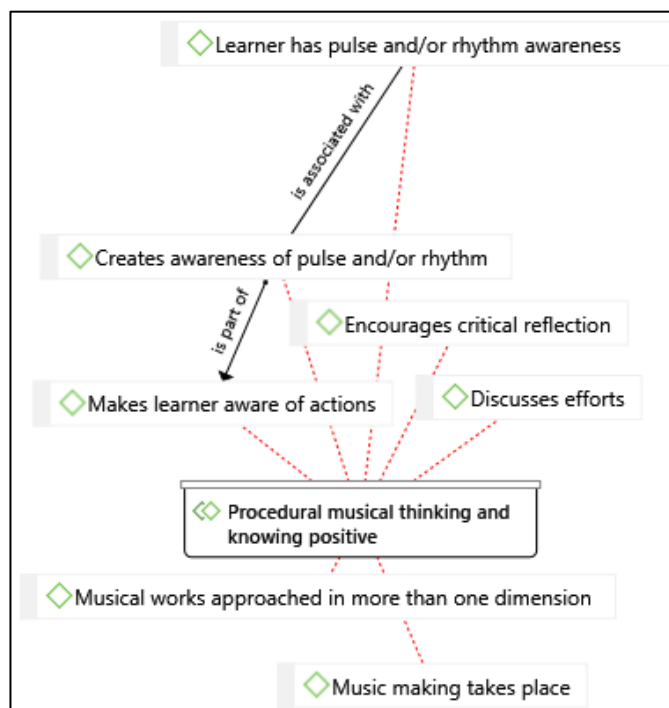
Figure 4-67_Codes_Procedural positive

Makes learner aware of actions occurred often for all the teachers. It refers to telling a learner what they did wrong or right. Anne (1:105) made L3 aware of her own actions, by saying she was singing the wrong notes (when she was modelling). This is important, as a learner should be made aware that the teacher sang the wrong notes; it may aid her listening skills. L3 of Dea (8:51) wrote "[s]he helps me understand why I went wrong and corrects me."

Creating awareness of pulse and/or rhythm was supported by all four teachers several times. It includes counting learners in, counting out loud for them, saying or clapping the rhythm, or letting them do so. Dea seemed to be the most aware of this aspect. She often gave verbal clues or cues while staying within the metre. *Learner has pulse and/or rhythm awareness* was seen across all four teachers' learners. It could be seen when they are counting out loud, tapping feet, or playing with a sense of the beat or with rhythmic precision after being made aware of it.

Encourages critical reflection came from all teachers, and refers to how they encourage learners to think about how they played and what was right, good, bad, or could be better. Anne (1:162) played for L4 and asked her if she could hear what Anne was doing different from her; thereby letting her reflect on her attempt. Beth (3:333) asked L5 if she (L5) played with any dynamics, and when L5 said no, she asked her why not, and L5 explained that *piano* is difficult. Dea (7:90) asked L1 "do you think you should end like that?" She was referring to the fact that he should have gone softer at the end of the piece

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and did not. L1 could not answer, but giggled, as he probably realised what he did. L3 of Dea (7:294) and her duet partner discussed their efforts: they both started talking, also elaborating on the people who would not know they made a mistake. They talked about who got lost where. Dea's learner said, "I like waited, and then we came together again". Her friend said "yes".

Music making takes place refers to learners getting the opportunity to make music in their lessons, instead of only small fragments and focusing on technical details only. It especially refers to when the teacher joins in with accompaniment or a duet part and thereby makes music with their learners. L1 of Beth (4:41) wrote she enjoys it most in her lessons "[w]hen we are playing beautifully together." *Musical works approached in more than one dimension* occurred often, and refers to the different levels of a work that should be acknowledged, as opposed to only learning notes. Anne (1:154) said the following to L4: "This is a merry-go-round. We want to at least give the people a bit of a head spin." She suggested a tempo and said, "we don't want them to really fall asleep" In this case, Anne acknowledged the implication of the title for the speed at which the piece is played. As it is closely related to interpretation, *Guides learner in appropriate interpretation* was also assigned.

Beth (3:144) with L2:

> Beth says see how many things there are in this song that L2 didn't notice, that will actually make it very nice. She says and she decided that they can play it at the concert, but he will then play it decently with everything right. She points out what she wrote or marked into his music, and points out staccatos etc. that he isn't doing. She says he should go from the start, softly, and feet on the ground.

Beth wanted L2 to observe the indications like repeats and octaves higher. Chris (5:60) stopped L1 and asked, "do you see slurs?", as she incorrectly played slurs. Even in the beginning stages of learning the piece, he wanted her to correctly apply slurs as written, and that is also an important dimension of a work for violin. Dea (7:237) said the following to L3: "Can you connect it for me? Legato." She sang the melody legato. Dea also wanted to make sure the duet was approached in more dimensions; therefore, she asked the learner to play more legato when it was necessary.
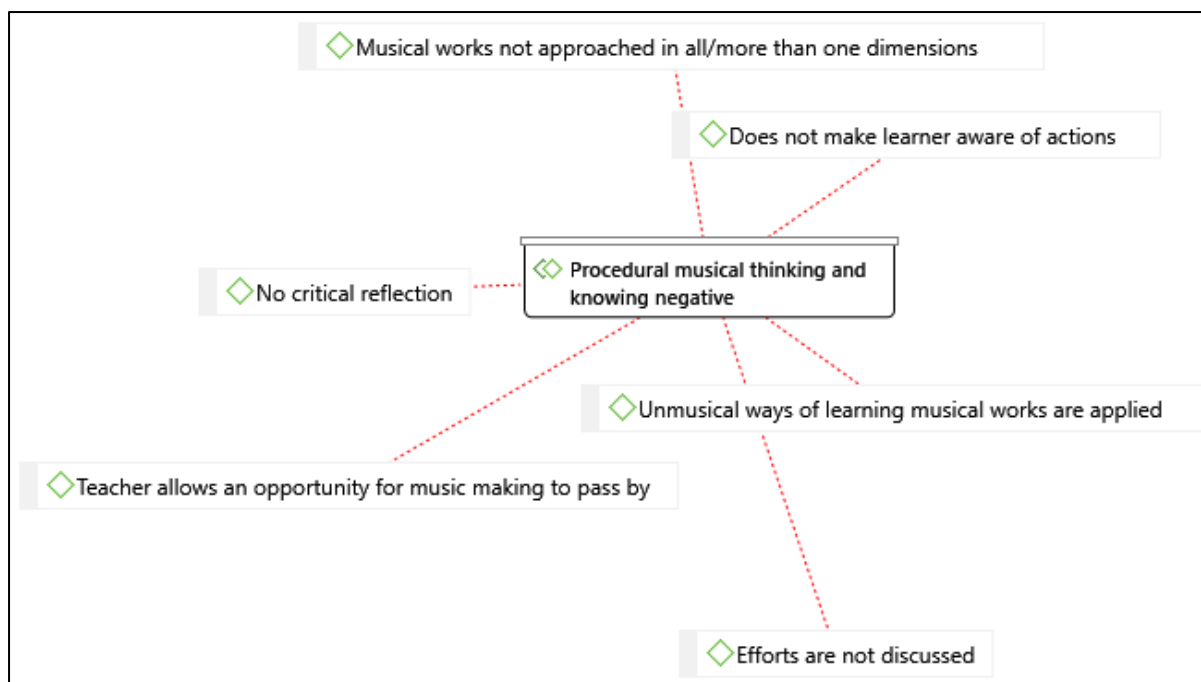
Figure 4-68_Codes_Procedural negative

No critical reflection was seen when L2 of Beth (3:162) did not and could not answer her when she asked what he thought of his playing.

Unmusical ways of learning musical works are applied had only one example in Beth (3:287), where she mentioned the amount of times L4 had to play the same note when L4 was doubting. A more musical way to help with playing repeated notes the correct amount of time would be to explain that it is a way the composer used to accentuate the off-beats. She could then have let the learner examine after which beats it happens, listen to it, and clap every time there is an accentuated off-beat note change.

In conclusion of musical understanding, it seems as though all four teachers took great effort towards teaching the correct 'know-how' in a musical practice (in this case an instrument), as far as they are aware of what is required. Teachers also create awareness of rhythm and pulse, and generally make their learners aware of their actions. Interpretation is also acknowledged and emphasised as important. Some teachers bring all the interpretive aspects in from the beginning, while some (like Dea) focus on learning the notes, and then add the dynamics. In some cases, teachers intervene too soon, but mostly they allow or help learners to act appropriately under pressure.

Verbal musical thinking and knowing was greatly supported, as verbal communication is a primary way of imparting knowledge. It seems as though it is therefore the simplest way that any music teacher can support musical understanding. The less verbal ways of thinking and knowing are however sometimes less simple to support, and take perhaps more thought and creativity from

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teachers. Learners sometimes show that their verbal musical thinking and knowing is not integrated with practice, as they, for instance, often leave out sharps or flats, although they know it in theory. Teachers can perhaps attempt to integrate music theory more with practice, by letting it overlap, and not keeping theory strictly academic (if the instrumental teacher is also the theory teacher). Modelling is however a simple non-verbal act, which is an effective way of conveying how something should sound or look, as music is essentially non-verbal, and cannot always be sufficiently communicated in words.

All four of these teachers focused on creating opportunities to make music in the lesson. Ethical and appreciative musical thinking and knowing seems to be neglected in comparison to the other kinds of musical thinking and knowing. It seems as though discussions of context do not often take place; however, one cannot know whether it perhaps did take place during the initial stages of learning a new piece. Creativity does not seem to be a high priority in these individual lessons. Teachers may feel that their primary role is to teach learners all about their instrument, and focusing on precision in learning existing musical works. It was shown that practising time at home can be utilised to explore possibilities on the instrument and develop creativity, where the pressure will be less and there may be more spontaneity.

Chapter 5 : Conclusions

The topic of this study was chosen because many children (and adults) have been known to start learning a musical instrument out of a desire to make music, an interest in a specific musical instrument, or because of familial pressure. In many cases, especially for those who started an instrument for intrinsically motivated reasons, the prospect and/or initial stages of learning were approached with enthusiasm, which in many cases faded after a period of time. In a scenario like this, these individuals will not be able to benefit from the potentially enriching experience of pursuing music. This study was undertaken to examine ways in which teachers can help learners to maintain the desire to learn a musical instrument, so that they will hopefully enjoy music lifelong. The study theorised that this can be achieved through promoting self-determined behaviours in the teaching of musical understanding.

Specifically, the research attempted to discover ways that teachers can promote self-determined behaviours in individual instrumental lessons. That is to support learners' basic psychological needs, to aid internalisation of extrinsically motivated activities, and to nurture their intrinsic motivation, so that they will not lose their passion, interest and enjoyment of playing an instrument. These issues were addressed both by looking at the positive actions of teachers and at the negative actions which should be avoided, or that could be approached in a way that is supportive of musical understanding and/or self-determined behaviour.

5.1 How instrumental teachers can promote self-determined behaviour

How teachers can be SDT supportive in individual instrumental lessons was addressed in the literature review, but yielded many more results from the data.

From the literature, **competence** can be supported through positive feedback from a teacher, which should not only be reserved for successful outcomes, but also for every step and measure taken by a learner towards progress and development. Teachers should also have an attitude of 'effort leads to success', rather than 'talent alone leads to success'. Learners should be presented with optimal and manageable challenges. Practising also contributes towards feelings of achievement and therefore competence, but should be approached in such a way that it can lead to these positive outcomes; therefore, teachers can also put effort into teaching learners to practise strategically.

In the data that was collected, many examples of teachers supporting **competence** and learners feeling competent were found. They all provided positive feedback on a regular basis – for the effort

put into the learning process, and not just for positive outcomes. It showed that supporting competence is simple and easy, as long as teachers ensure that they acknowledge and praise all efforts, and look for something good in every attempt, so that learners do not get discouraged. In most cases, challenges were both optimal and manageable, and it was found that it is an aspect that learners enjoy. The teachers mostly showed the ability to choose (or present options of) works that challenge learners just the appropriate amount. Whenever it was not the case, it seemed to be due to following syllabi that have fixed standards. All teachers stressed that hard work and effort lead to success. It took the form of alerting learners to how their practising contributed towards better results in the lesson, or by reassuring a learner that their skill will improve and grow over time. From learners' own accounts, it was clear that practising can contribute greatly to how competent they feel; therefore, this should not be neglected as something that learners should just know how to do. Teachers should consider practise strategies and goals as part of what they teach learners. Learners will not always have an instrumental teacher in the future, and if they know how to practise and enjoy the results independently, they can continue learning new material, or effectively practise their part in a choir, orchestra or ensemble on their own. This may increase their chances of enjoying their instruments (or other musical activities) beyond the years of tuition.

Relatedness according to literature can be supported by facilitating interaction with peers, or to be sensitive about how music affects one's role with peers, educating parents on how instrumental learning may affect the household to avoid conflict, building relationships with students, facilitating friendly interactions, acknowledging that music will not always be top priority, and in the beginning stages especially showing warmth. The role of the parents or family is especially important in giving support and showing understanding towards instrumental learning.

In the current study, it was shown that teachers can show friendliness (which can contribute to relationship building) in numerous ways, including humour, interacting with learners, taking interest in their lives, listening, returning affection, being approachable, being supportive, being patient, not inducing guilt and shame, and giving praise (like in competence support). Confirming the literature, the data found that support or a lack of support is an important factor, as is the relationship with friends. There were examples where learners were negatively impacted by their families' lack of support – feelings of isolation from having to practise apart from one's family, as they are bothered by the noise, or a sister and father who complain about the sound. These examples may make it more challenging for these learners to succeed, as their families make it hard or unpleasant for them to practise. A few learners reported/showed that they connect with their friends through instrumental learning in the form of helping each other, having group lessons, ensemble playing, or talking about their instrumental learning with each other. Where relatedness with teachers fell short (in the case of Chris with L1 and L3), it seems as if relatedness to significant others can help fill the gap, as both

these learners reported how they enjoy being helped by a friend, or having lessons with a friend. L3 also gets support from her mother, who listens to her practising, and she reported enjoyment of practising. This, together with the previous negative examples suggest that parents should be present (or at least offer to be present) during their children's practising. It is a suggestion that teachers could make to new parents when educating them on the demands of a musical instrument. Dea had her learner play a duet with a friend, and playing together seemed to add to their enjoyment. This is also an idea of how interaction with peers can be facilitated – instead of choosing a duet partner for a learner, teachers could let the learner choose one of their friends, if possible.

All four teachers in the study showed high levels of **relatedness** with their learners; however, in the cases of Beth and Chris there were some discrepancies. L3 of Chris seemed to be scared to have lessons alone with him, and therefore shares it with L1. The group setting could be a reason for not building a personal relationship with Chris for both these learners, but the reason for being scared or not trusting him is unknown. Could it possibly be a gender issue? Beth's exception was L2, a boy who was treated differently by her, and who did not feel related to her. Whatever her reasons for treating him differently – perhaps because he is a difficult child to work with – makes a case for teachers to treat everyone according to the same principles, and not be harder on or less understanding towards difficult learners. It was also shown that the most important way to promote relatedness in a teacher-learner relationship, is by building a relationship; even more than always acting correctly according to other relatedness parameters. Chris acted towards all his learners in ways that one would think would promote relatedness – often making jokes, being friendly, being understanding – but his results showed lower levels of relatedness. Beth's learners, however, generally felt very much related to her. Beth did and said many things which seemed to be potentially relatedness thwarting, but as she presumably extended a lot of effort towards building relationships with her learners, these instances did not change their feelings towards her. In instrumental tuition, teachers will probably sometimes have to be honest and stern if learners are not doing their best, or not cooperating, but it seems as though a good relationship may make it possible for teachers to do so without estranging their learners from them.

According to the literature, **autonomy** is harder to support in classical music training, but musicians who take responsibility for their learning will likely continue beyond tuition. Being able to find and solve problems on their own will also enable learners to become their own teachers in the future. Autonomy support, together with the other two needs is essential for internalisation of extrinsic motivation to take place. Ways that autonomy can be supported include offering choice, providing rationales to activities, acknowledging learners' feelings and perspectives, letting them have a hand in how a lesson proceeds, and supporting and encouraging creative activities.

The current study showed examples of how learners take responsibility for their own learning, but in some cases, seem to be completely dependent on their teachers. Teachers can and did (however, not very often) give learners responsibility, thereby encouraging or forcing them to take it. They did this by giving learners the responsibility to make lesson arrangements with them, or to fix problems by themselves instead of being drilled in the lesson (provided the teacher has provided sufficient guidance). The teachers also offered learners choices by letting them choose pieces or exercises that they like best from the options available. However, it seems that most teachers were lacking in including learners in the lesson plan, and easily could have supported autonomy by just asking them, for instance, what they would like to start with. Teachers also seem to be lacking in providing creative activities, as this is perhaps viewed as less important in an instrumental lesson, where technical proficiency and mastering existing works are often seen as the ultimate goal. However, if creative activities are forced on learners, it will not be autonomy supportive anymore.

External regulation could be seen in the way that Beth threatened learners with telling their class teachers that they forgot their homework books at home, checked up on them by sending home practising schedules that need to be signed by parents, and that two of her learners were rebelling by lying, and by not taking part in the learning process. Instead of checking up or threatening, teachers could rather extend effort in making learners understand the value of practising, and that their homework books are important because their teachers can write down their weekly goals for practising. Schedules can be helpful to help learners keep track of their practising, but should maybe be used voluntarily by them if they feel they need it. Rebelling is a clear sign that learners are externally regulated, as it is the alternative to passive compliance (the only two possible responses to this kind of regulation). Rebelling could thus be an indication to teachers that they are perhaps too controlling and should change their approach.

Introjected regulation was very high across all four teachers' learners, and there was not a strong correlation between what teachers did and how learners felt. It is surprising, as the basic psychological needs were generally supported well. It was mostly the learners who reported and showed high levels of relatedness towards their teachers who showed the highest levels of introjected regulation. The learners with lower relatedness levels in some cases showed low levels of introjected regulation, or at least not particularly high in comparison to others. The learners who showed these high levels seemed to be very 'well-behaved' and responsible learners. This lead to the question whether relatedness could possibly be the cause of introjected regulation. It could also be that learners developed this from their school environments and/or homes, and are thus projecting the same expectations onto their music teachers.

Identified regulation was shown to be high across the spectrum of learners, where they identify with the value of, for instance, practising, despite not particularly enjoying it, or seeing their instrumental learning as contributing to, for instance, stress release. There were examples of **integrated regulation**, where learners felt that music was part of their identities and life goals. This can be seen as evidence that the teachers' support of all the basic psychological needs was yielding positive results for internalisation.

Intrinsic motivation was high for all learners, as they showed enjoyment and interest in learning, and in some cases passion. The thorough support for the psychological needs again may help ensure that learners will maintain this motivation. A love for the instrument also surfaced in the data. This shows the importance of choosing an instrument that one is comfortable with and enjoys, which parents can support by letting their children make an informed decision based on exposure. Schools can attempt to offer more options of instruments by having part-time specialist teachers for the instruments that the full-time staff cannot teach, or at least make sure that learners and parents are informed of nearby music schools or private teachers where they can have access to the instruments that they desire to learn. Schools' music departments can present instrumental demonstrations, where learners can be exposed to different instruments to make informed decisions about which ones they would like to learn.

5.2 Teaching musical understanding in instrumental lessons

According to the literature, musical understanding can be taught by providing optimal and manageable challenges, making learners aware of their actions, promoting problem finding and solving, reflecting critically, contextualising verbal concepts, teaching the correct 'know-how' in a specific musical practice, guiding and developing a learner's interpretive ability, encouraging creativity, acknowledging the historical and/or cultural context of works, helping and allowing a learner to solve problems under pressure, and creating appropriate musical images or imaginations. In this study, musical understanding was greatly promoted by all the teachers, and it is clear that they value the development of it. In individual instrumental lessons, teaching the appropriate ways of playing an instrument is how 'know-how' in a specific musical practice can be taught. It is therefore important that teachers must be aware of what a practice requires one to know or be able to do. Not all the teachers are specialists on all the instruments that they teach, which is a consequence of what schools expect from their music staff, and perhaps a lack of funding to employ more music staff who could offer deeper knowledge and understanding of specific instruments. Chris is for instance a violin specialist, and teaches only violin at his school, while Beth has to teach all the instruments that she can play, as she is the only music teacher at her school. Another aspect of learning a specific instrument is whether it can have a possible negative impact on one's physical well-being. Most teachers encouraged learners to be relaxed and have good postures; however, some learners reported

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physical pain or discomfort associated with playing, and one boy fainted while playing the saxophone. Teachers must also be sensitive towards these physical aspects, as possible damage can force someone to cease playing their instrument, impacting lifelong musical enjoyment negatively.

Ethical and appreciative musical thinking and knowing seems to lack greatly from individual instrumental tuition. Teachers can extend the effort to have more discussions about musical works and their backgrounds, like the composer, the time period and culture surrounding it. Chris provided a very effective example, by briefly telling L2 about the background of her piece, what it was written for, who the composer wrote for, and the practices surrounding the purpose of the work. He brought it to life by dancing with the learner. Creative activities do not seem to be a priority. However, in some instruments it may be more important than others. In learning the saxophone, if improvisation skills are not developed, teachers may limit their learners to wind orchestra playing, while they could also be involved in jazz bands where improvisation is a requirement. For string instruments, there are many formal music practices where one mainly relies on music reading, and less often on improvisation. For all instruments, it is nevertheless worthwhile to explore one's creative possibilities. If teachers find it too time consuming, jamming sessions outside lessons can be an option. There is also less pressure, as it takes place in a group. Furthermore, composition or arrangement classes could be incorporated as part of music theory, or as a separate activity, depending on circumstances. This will unlock the possibility for some to mainly enjoy music through composing. One can, however, not tell whether teachers really do neglect this aspect, as this study only provided insight into a single individual instrumental lesson per learner, and not into their other musical endeavours.

5.3 Musical enjoyment

Musical enjoyment seemed to take place especially when being able to master optimal and manageable challenges, which is also a way of supporting competence. Making music, especially with someone, seems to be enjoyable to most learners, and promotes relatedness to other learners. In some cases, to explore the instrument was enjoyable, which can also support autonomy. SDT and musical understanding is shown to have convergences and be compatible. SDT support may unlock the ability to teach musical understanding, as it will take place – and proves to through findings – more effectively if learners feel competent in every step of the learning process, feel related to the person (their teacher) who is leading them towards musical understanding, and feel that they are acting voluntarily, consequently taking responsibility for the learning process.

5.4 Recommendations

To summarise the possible issues that can further be addressed: practising and the valuable contributions it can make towards competence and musical understanding, is worth investigating further – perhaps ways in which teachers can ensure that it happens without enforcing it through external regulation. Making sure learners practise, is a challenge in the South African school context (amongst many other contexts) with learners having a lot of homework, extra-mural activities, and socialisation or recreational activities.

The impact that gender differences have on relatedness in the individual instrumental lessons also seems to need further research. It has previously been found that "within the school context, research findings suggest that boys are more likely than girls to perceive their teachers as less supportive" (Katz, 2016:4). This may partially explain L2, a boy, of Beth, who experiences low levels of relatedness to her. What has also been found, is that "the characteristics of the perceiver" is just as prominent in how the perceiver will perceive someone, as are the actions of the one being perceived. (*Ibid*.:3). This can also explain why Chris seemed to support all the needs, but is not perceived as such by some learners. Could it also be that the gender of the teacher plays a role in how a learner will perceive the teacher? One specific learner (L1 of Dea) opened up the possibility of the influence of culture on musical enjoyment (he is a Korean boy).

Introjected regulation was shown to be a problem that many learners are facing, despite the fact that theoretically, it should not have been that way. Possible problems in the school system, in our society, and in the South African context could further be researched as possible reasons for learners feeling guilty easily, and being concerned about letting their music teachers down. Ryan *et al.* (1994:231) wrote that it has previously been found that there are many different perceptions among learners in the class about their teachers, which may suggest that their perceptions are influenced by their "home environment".

For musical understanding, it could be further researched how theory and practice are not effectively integrated in current syllabi that are used in schools by music teachers. Physical aspects, and how aware teachers are of ways to promote physical well-being in instrumental learning are also points that should receive awareness.

On a personal note

This study has confirmed to me that despite unforeseen factors (perception issues, unexplained shame and guilt), music teachers still have the power to shape learners' experiences of enjoyment positively. Most of the findings confirmed or unlocked tools that we as teachers can utilise to take learners a step (or few) closer towards lifelong musical enjoyment. We do not know how much or little time we will get to shape each learner, but during that time, we can try our best to ensure that our actions are worthwhile in positively effecting their (hopefully lifelong) musical enjoyment.

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Appendix 1.1_REC approval

Approved with Stipulations
Response to Modifications- (New Application)

24-Oct-2016
Janse van Rensburg, Lisa-Mari LA

Proposal #: SU-HSD-002568

Title: **The application of the Self-Determination Theory combined with musicianship teaching in individual instrumental lessons to encourage lifelong musical enjoyment**

Dear Mrs Lisa-Mari Janse van Rensburg,

Your **Response to Modifications - *(New Application)*** received on **12-Oct-2016**, was reviewed by members of the **Research Ethics Committee: Human Research (Humanities)** via Expedited review procedures on **24-Oct-2016**.

Please note the following information about your approved research proposal:

Proposal Approval Period: **24-Oct-2016** -**23-Oct-2017**

The following stipulations are relevant to the approval of your project and must be adhered to:
The researcher is reminded to submit copies of the permission letters from participating schools to the REC for recordkeeping as soon as it is obtained. Data collection may only commence at the school where the principals' permission is confirmed.

Please provide a letter of response to all the points raised IN ADDITION to HIGHLIGHTING or using the TRACK CHANGES function to indicate ALL the corrections/amendments of ALL DOCUMENTS clearly in order to allow rapid scrutiny and appraisal.

Please take note of the general Investigator Responsibilities attached to this letter. You may commence with your research after complying fully with these guidelines.

Please remember to use your **proposal number** (**SU-HSD-002568**) on any documents or correspondence with the REC concerning your research proposal.

Please note that the REC has the prerogative and authority to ask further questions, seek additional information, require further modifications, or monitor the conduct of your research and the consent process.

Also note that a progress report should be submitted to the Committee before the approval period has expired if a continuation is required. The Committee will then consider the continuation of the project for a further year (if necessary).

This committee abides by the ethical norms and principles for research, established by the Declaration of Helsinki and the Guidelines for Ethical

Research: Principles Structures and Processes 2004 (Department of Health). Annually a number of projects may be selected randomly for an external audit.

National Health Research Ethics Committee (NHREC) registration number REC-050411-032.

We wish you the best as you conduct your research.

If you have any questions or need further help, please contact the REC office at .

Included Documents:

Request for Modifications - REC feedback letter.pdf

REC: Humanities New Application

Sincerely,

Clarissa Graham

REC Coordinator

Research Ethics Committee: Human Research (Humanities)

Investigator Responsibilities

Protection of Human Research Participants

Some of the general responsibilities investigators have when conducting research involving human participants are listed below:

1.<u>Conducting the Research.</u> You are responsible for making sure that the research is conducted according to the REC approved research protocol. You are also responsible for the actions of all your co-investigators and research staff involved with this research. You must also ensure that the research is conducted within the standards of your field of research.

2.<u>Participant Enrollment.</u> You may not recruit or enroll participants prior to the REC approval date or after the expiration date of REC approval. All recruitment materials for any form of media must be approved by the REC prior to their use. If you need to recruit more participants than was noted in your REC approval letter, you must submit an amendment requesting an increase in the number of participants.

3.<u>Informed Consent.</u> You are responsible for obtaining and documenting effective informed consent using **only** the REC-approved consent documents, and for ensuring that no human participants are involved in research prior to obtaining their informed consent. Please give all participants copies of the signed informed consent documents. Keep the originals in your secured research files for at least five (5) years.

4.<u>Continuing Review.</u> The REC must review and approve all REC-approved research proposals at intervals appropriate to the degree of risk but not less than once per year. There is **no grace period.** Prior to the date on which the REC approval of the research expires, **it is your responsibility to submit the continuing review report in a timely fashion to ensure a lapse in REC approval does not occur.** If REC approval of your research lapses, you must stop new participant enrollment, and contact the REC office immediately.

5.<u>Amendments and Changes.</u> If you wish to amend or change any aspect of your research (such as research design, interventions or procedures, number of participants, participant population, informed consent document, instruments, surveys or recruiting material), you must submit the amendment to the REC for review using the current Amendment Form. You **may not initiate** any amendments or changes to your research without first obtaining written REC review and approval. The **only exception** is when it is necessary to eliminate apparent immediate hazards to participants and the REC should be immediately informed of this necessity.

6.<u>Adverse or Unanticipated Events.</u> Any serious adverse events, participant complaints, and all unanticipated problems that involve risks to participants or others, as well as any research related injuries, occurring at this institution or at other performance sites must be reported to Malene Fouch within **five (5) days** of discovery of the incident. You must also report any instances of serious or continuing problems, or non-compliance with the RECs requirements for protecting human research participants. The only exception to this policy is that the death of a research participant must be reported in accordance with the Stellenbosch Universtiy Research Ethics Committee Standard Operating Procedures. All reportable events should be submitted to the REC using the Serious Adverse Event Report Form.

7.<u>Research Record Keeping.</u> You must keep the following research related records, at a minimum, in a secure location for a minimum of five years: the REC approved research proposal and all amendments; all informed consent documents; recruiting materials; continuing review reports; adverse or unanticipated events; and all correspondence from the REC

8.<u>Provision of Counselling or emergency support.</u> When a dedicated counsellor or psychologist provides support to a participant without prior REC review and approval, to the extent permitted by law, such activities will not be recognised as research nor the data used in support of research. Such cases should be indicated in the progress report or final report.

9.<u>Final reports.</u> When you have completed (no further participant enrollment, interactions, interventions or data analysis) or stopped work on your research, you must submit a Final Report to the REC.

10.<u>On-Site Evaluations, Inspections, or Audits.</u> If you are notified that your research will be reviewed or audited by the sponsor or any other external agency or any internal group, you must inform the REC immediately of the impending audit/evaluation.

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Appendix 1.2_Headmaster consent

STELLENBOSCH UNIVERSITY
HEADMASTER CONSENT TO PARTICIPATE IN RESEARCH

The application of the Self-Determination Theory combined with the teaching of musical understanding in individual instrumental lessons to encourage lifelong musical enjoyment

Your music teacher is asked to participate in a research study conducted by Lisa-Mari Janse van Rensburg (BMus), from the Music Department at Stellenbosch University. The results will be contributed to her Master's thesis. Your teacher was selected as a possible participant in this study because he/she is a music teacher of individual instrumental learners.

1. PURPOSE OF THE STUDY

The researcher wants to know how to promote lifelong musical enjoyment, and therefore examines processes through which it is most likely to be achieved. It is theorized in this study that instrumental teachers' support of the *Self-Determination Theory (consciously or unconsciously), together with the teaching of *musical understanding in the individual lesson may likely predict learners' enjoyment of learning their instruments, which will hopefully lead to their lifelong musical enjoyment.

*Self-Determination Theory: A positive psychological theory by Deci and Ryan (2000) of human motivation and personality. It believes in humans' innate desire to grow and develop psychologically, and at the same time states that the three basic psychological needs (competence, relatedness, autonomy) have to be fulfilled in order for humans to function at their best.

*Musical understanding: musical thinking and making in action.

2. PROCEDURES

If your teacher volunteers to participate in this study, we would ask him/her to do the following things:

- Recruit five of his/her individual learners within grade four to seven, of **any** level of playing, to participate in the research. This will include sending a parent consent and learner assent form home with them to be signed by them and their parents.

- Arrange a 45-60 minutes time slot for questionnaire completion for all his/her learners being observed, where the researcher can be present to answer their questions. The teacher may be present, but preferably just to supervise, and not to have insight or input into their answers.

- Two individual instrumental lessons per learner will be observed by the researcher, and video recorded so that it can be analysed in detail afterwards. The purpose of the observation is to gain insight into the teaching-learning situation; not to judge the standard or level of playing. Nothing specific is required of your teacher, except to handle the situation as normally as a lesson would usually take place.

- The participation time will be no longer than that of two regular lessons of five different learners, taking place where it usually does.

Please take note: Video recordings and questionnaire completion may not commend without signed consent and assent forms from five learners and their parents, as well as from the headmaster and the music teacher involved.

3. POTENTIAL RISKS AND DISCOMFORTS

This study will not put the school at any risk, especially with participation being completely voluntary for the teacher and learners, and them being fully informed of the procedures and having signed consent.

Observations of lessons will not take up any extra school time, except for that of two normal instrumental lessons.

The learners will also be asked to complete a questionnaire, which may require one or two extra school periods, which the teacher will be asked to arrange.

4. POTENTIAL BENEFITS TO SUBJECTS AND/OR TO SOCIETY

The school may not directly benefit from the current research. However, after successful completion and possible publication of the research product, music teachers may learn more about motivation and the teaching of musical understanding and may successfully apply it to their teaching.

5. PAYMENT FOR PARTICIPATION

This study does not include payment for participation.

6. CONFIDENTIALITY

Any information that is obtained in connection with this study and that can be identified with your school, teacher, or learners will remain confidential and will be disclosed only with your/their permission or as required by law. Confidentiality will be maintained by means of referring to each case as for instance "teacher A, student 1" etc. Only the researcher will be in possession of the information, and where necessary, the researcher's supervisor will have access to it.

The researcher and her supervisor will have access to the video recordings, but they will not be distributed or used for any other purposes than that of data analyses.

7. PARTICIPATION AND WITHDRAWAL

Your teacher and learners can choose whether to be in this study or not. If they volunteer to be in this study, they may withdraw at any time without consequences of any kind. The investigator may withdraw them from this research if circumstances arise which warrant doing so.

8. IDENTIFICATION OF INVESTIGATORS

If you have any questions or concerns about the research, please feel free to contact Lisa-Mari Janse van Rensburg at 079 529 8290 / lisamarir10@gmail.com or Danell Herbst (supervisor of this study) at 079 219 4501 / danellherbst@sun.ac.za.

9. RIGHTS OF RESEARCH SUBJECTS

Your school may withdraw consent at any time and discontinue participation without penalty. You are not waiving any legal claims, rights or remedies because of your participation in this research study. If you have questions regarding your rights as a research subject, contact Ms Maléne Fouché [mfouche@sun.ac.za; 021 808 4622] at the Division for Research Development.

SIGNATURE OF HEADMASTER

The information above was described to [*me/the subject/the participant*] by [*name of relevant person*] in [*Afrikaans/English/Xhosa/other*] and [*I am/the subject is/the participant is*] in command of this language or it was satisfactorily translated to [*me/him/her*].   [*I/the participant/the subject*] was given the opportunity to ask questions and these questions were answered to *[my/his/her]* satisfaction.

[I hereby consent voluntarily to participate in this study/I hereby consent that the subject/participant may participate in this study.] I have been given a copy of this form.

_____
Name of Subject/Participant

_____
Name of Legal Representative (if applicable)

_____   _____
Signature of Subject/Participant or Legal Representative   Date

SIGNATURE OF INVESTIGATOR

I declare that I explained the information given in this document to _____ [*name of the subject/participant*] and/or [his/her] representative _____ [*name of the representative*]. [*H*e/she] was encouraged and given ample time to ask me any questions. This conversation was conducted in [*Afrikaans/*English/*Xhosa/*Other*] and [*no translator was used/this conversation was translated into _____ by _____*].

_____   _____
Signature of Investigator   Date

Appendix 1.3_Teacher consent

STELLENBOSCH UNIVERSITY
TEACHER CONSENT TO PARTICIPATE IN RESEARCH

The application of the Self-Determination Theory combined with the teaching of musical understanding in individual instrumental lessons to encourage lifelong musical enjoyment

You are asked to participate in a research study conducted by Lisa-Mari Janse van Rensburg (BMus), from the Music Department at Stellenbosch University. The results will be contributed to her Master's thesis. You were selected as a possible participant in this study because you are a music teacher of individual instrumental learners.

1. PURPOSE OF THE STUDY

The researcher wants to know how to promote lifelong musical enjoyment, and therefore examines processes through which it is most likely to be achieved. It is theorized in this study that instrumental teachers' support of the *Self-Determination Theory (consciously or unconsciously), together with the teaching of *musical understanding in the individual lesson may likely predict learners' enjoyment of learning their instruments, which will hopefully lead to their lifelong musical enjoyment.

*Self-Determination Theory: A positive psychological theory by Deci and Ryan (2000) of human motivation and personality. It believes in humans' innate desire to grow and develop psychologically, and at the same time states that the three basic psychological needs (competence, relatedness, autonomy) have to be fulfilled in order for humans to function at their best.

*Musical understanding: musical thinking and making in action.

2. PROCEDURES

If you volunteer to participate in this study, we would ask you to do the following things:

- Recruit five of your individual learners within grade four to seven, of **any** level of playing, to participate in the research. This will include sending a parent consent and learner assent form home with them to be signed by them and their parents.

- Arrange a 45-60 minutes time slot for questionnaire completion for all your learners being observed, where the researcher can be present to answer their questions. You may be present, but preferably just to supervise, and not to have insight or input into their answers.

- Two individual instrumental lessons per learner will be observed by the researcher, and video recorded so that it can be analysed in detail afterwards. The purpose of the

observation is to gain insight into the teaching-learning situation; not to judge the standard or level of playing. Nothing specific is required of you, except to handle the situation as normally as a lesson would usually take place.

- ▪ The participation time will be no longer than that of two regular lessons of five different learners, taking place where it usually does.

Please take note: Video recordings and questionnaire completion may not commend without signed consent and assent forms from five learners and their parents.

3. POTENTIAL RISKS AND DISCOMFORTS

It may feel uncomfortable to have an observer in the lessons and to be recorded, but I will not interfere with the lessons in any way. After a while you may forget that I am there!

Your learners will also be asked to complete a questionnaire about their experiences in their lessons in which they will be asked to be very honest about positive and less positive experiences.

4. POTENTIAL BENEFITS TO SUBJECTS AND/OR TO SOCIETY

You as teacher may not directly benefit from the current research. However after successful completion and possible publication of the research product, music teachers may learn more about motivation and the teaching of musical understanding and may successfully apply it to their teaching.

5. PAYMENT FOR PARTICIPATION

This study does not include payment for participation.

6. CONFIDENTIALITY

Any information that is obtained in connection with this study and that can be identified with you will remain confidential and will be disclosed only with your permission or as required by law. Confidentiality will be maintained by means of referring to each case as for instance "teacher A, student 1" etc. Only the researcher will be in possession of the information, and where necessary, the researcher's supervisor will have access to it.

The researcher and her supervisor will have access to the video recordings, but they will not be distributed or used for any other purposes than that of data analyses.

7. PARTICIPATION AND WITHDRAWAL

You can choose whether to be in this study or not. If you volunteer to be in this study, you may withdraw at any time without consequences of any kind. The investigator may withdraw you from this research if circumstances arise which warrant doing so.

8. IDENTIFICATION OF INVESTIGATORS

If you have any questions or concerns about the research, please feel free to contact Lisa-Mari Janse van Rensburg at 079 529 8290 / lisamarir10@gmail.com or Danell Herbst (supervisor of this study) at 079 219 4501 / danellherbst@sun.ac.za.

9. RIGHTS OF RESEARCH SUBJECTS

You may withdraw your consent at any time and discontinue participation without penalty. You are not waiving any legal claims, rights or remedies because of your participation in this research study. If you have questions regarding your rights as a research subject, contact Ms Maléne Fouché [mfouche@sun.ac.za; 021 808 4622] at the Division for Research Development.

SIGNATURE OF MUSIC TEACHER

The information above was described to [*me/the subject/the participant*] by [*name of relevant person*] in [*Afrikaans/English/Xhosa/other*] and [*I am/the subject is/the participant is*] in command of this language or it was satisfactorily translated to [*me/him/her*].   [*I/the participant/the subject*] was given the opportunity to ask questions and these questions were answered to *[my/his/her]* satisfaction.

[*I hereby consent voluntarily to participate in this study/I hereby consent that the subject/participant may participate in this study.*] I have been given a copy of this form.

_____
Name of Subject/Participant

_____
Name of Legal Representative (if applicable)

_____   _____
Signature of Subject/Participant or Legal Representative   Date

---

SIGNATURE OF INVESTIGATOR

I declare that I explained the information given in this document to _____ [*name of the subject/participant*] and/or [his/her] representative _____ [*name of the representative*]. [*H*e/she] was encouraged and given ample time to ask me any questions. This conversation was conducted in [*Afrikaans/*English/*Xhosa/*Other*] and [*no translator was used/this conversation was translated into* _____ *by* _____].

_____   _____
Signature of Investigator   Date

Appendix 1.4_Parent consent

UNIVERSITEIT·STELLENBOSCH·UNIVERSITY
jou kennisvennoot • your knowledge partner

STELLENBOSCH UNIVERSITY
CONSENT TO PARTICIPATE IN RESEARCH

The application of the Self-Determination Theory combined with the teaching of musical understanding in individual instrumental lessons to encourage lifelong musical enjoyment

Your child is asked to participate in a research study conducted by Lisa-Mari Janse van Rensburg (BMus), from the Music Department at Stellenbosch University. The results will be contributed to her Master's thesis. Your child was selected as a possible participant in this study because he / she is a primary school music learner within grade four to seven who takes individual instrumental lessons.

1. PURPOSE OF THE STUDY

Learners often start learning an instrument with much enthusiasm; however, it sometimes fades after a while, which often leads to ending their instrumental learning altogether. This tendency prevents them from reaping the lifelong benefits and enrichment that musical engagement may offer.

The researcher thus wants to know how to promote **lifelong** musical enjoyment, and therefore examines processes through which it is most likely to be achieved. It is theorized in this study that instrumental teachers' support of the *Self-Determination Theory (consciously or unconsciously), together with the teaching of *musical understanding in the individual lesson may likely predict learners' enjoyment of learning their instruments, which will hopefully lead to their lifelong musical enjoyment.

*Self-Determination Theory: A positive psychological theory by Deci and Ryan (2000) of human motivation and personality. It believes in humans' innate desire to grow and develop psychologically, and at the same time states that the three basic psychological needs (competence, relatedness, autonomy) have to be fulfilled in order for humans to function at their best.

*Musical understanding: musical thinking and making in action.

2. PROCEDURES

If you agree to your child's participation in this study, we would ask **you** and **him / her** to do the following things:

- ▪ You have to sign consent on this document; your child should sign assent on the document compiled for him / her.

- Two of his / her individual instrumental lessons will be observed by the researcher, and video recorded to aid in the detailed analysis of the lessons. Please take note that the observation is **not** to judge your child's standard or level of playing, but to examine the teacher-learner dynamic, and how musical understanding manifests itself in the teaching-learning situation. Your child should just try to handle the situation as normally as a lesson would usually take place.

- He / she will also be asked to complete a questionnaire about how he / she experiences his / her instrumental learning and teacher.

3. POTENTIAL RISKS AND DISCOMFORTS

There are no risks in this study – your child will not be exposed or judged in any way. It may at first feel uncomfortable for your child and his / her teacher to have an observer in the lessons and to be recorded, but I will not interfere with the lessons in any way. After a while they may forget that I am there!

4. POTENTIAL BENEFITS TO SUBJECTS AND/OR TO SOCIETY

Your child may not directly benefit from the current research, but in answering a questionnaire, he / she may be forced to think and reflect about his / her experiences, and perhaps form a better idea of the kind of learning environment he / she prefers, whether he / she is satisfied with the instrument he / she is learning, and how he / she may enjoy his / her instrument more. Future teachers reading the final research product may benefit from understanding how musical enjoyment can be promoted.

5. PAYMENT FOR PARTICIPATION

This study does not include payment for participation.

6. CONFIDENTIALITY

Any information that is obtained in connection with this study and that can be identified with you will remain confidential and will be disclosed only with your permission or as required by law. Confidentiality will be maintained by means of referring to each case as for instance "teacher A, student 1" etc. Only the researcher will be in possession of the information, and where necessary, the researcher's supervisor will have access to it.

The researcher and her supervisor will have access to the video recordings, but they will not be distributed or used for any other purposes than that of data analysis. After three years, the data will be destroyed.

7. PARTICIPATION AND WITHDRAWAL

You can choose whether to let your child participate in this study or not. If he /she volunteers to be in this study, he /she may withdraw at any time without consequences of any kind. He /she may also refuse to answer any questions he /she doesn't want to answer and still remain in the study. The investigator may withdraw your child from this research if circumstances arise which warrant doing so.

8. IDENTIFICATION OF INVESTIGATORS

If you have any questions or concerns about the research, please feel free to contact Lisa-Mari Janse van Rensburg at 079 529 8290 / lisamarir10@gmail.com or Danell Herbst (supervisor of this study) at 079 219 4501 / danellherbst@sun.ac.za.

9. RIGHTS OF RESEARCH SUBJECTS

You may withdraw your consent at any time and discontinue participation without penalty. You are not waiving any legal claims, rights or remedies because of your participation in this research study. If you have questions regarding your rights as a research subject, contact Ms Maléne Fouché [mfouche@sun.ac.za; 021 808 4622] at the Division for Research Development.

SIGNATURE OF PARENT

The information above was described to [*me/the subject/the participant*] by [*name of relevant person*] in [*Afrikaans/English/Xhosa/other*] and [*I am/the subject is/the participant is*] in command of this language or it was satisfactorily translated to [*me/him/her*].   [*I/the participant/the subject*] was given the opportunity to ask questions and these questions were answered to *[my/his/her]* satisfaction.

[I hereby consent voluntarily to participate in this study/I hereby consent that the subject/participant may participate in this study.] I have been given a copy of this form.

_____
Name of Subject/Participant

_____
Name of Legal Representative (if applicable)

_____   _____
Signature of Subject/Participant or Legal Representative   Date

---

SIGNATURE OF INVESTIGATOR

I declare that I explained the information given in this document to _____ [*name of the subject/participant*] and/or [his/her] representative _____ [*name of the representative*]. [*H*e/she] was encouraged and given ample time to ask me any questions. This conversation was conducted in [*Afrikaans/*English/*Xhosa/*Other*] and [*no translator was used/this conversation was translated into* _____ by _____].

_____   _____
Signature of Investigator   Date

Appendix 1.5_Learner assent

	# STELLENBOSCH UNIVERSITY
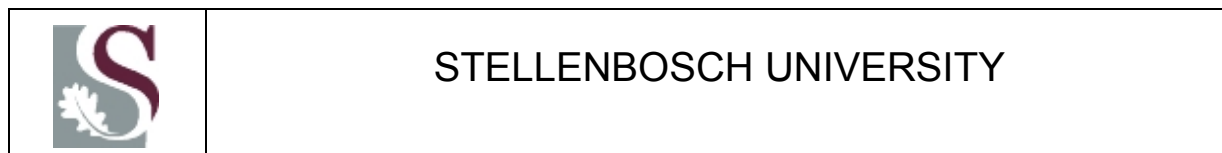
PARTICIPANT (LEARNER) INFORMATION LEAFLET AND ASSENT FORM

TITLE OF THE RESEARCH PROJECT: The application of the Self-Determination Theory combined with the teaching of musical understanding in individual instrumental lessons to encourage lifelong musical enjoyment

RESEARCHERS NAME(S): Lisa-Mari Alexandra Janse van Rensburg

ADDRESS: Rolbos 2, Kleinbosch avenue, Strand, 7140

CONTACT NUMBER: 079 529 8290

What is RESEARCH?
Research is something we do to find **NEW KNOWLEDGE** about the way things (and people) work. We use research projects or studies to help us find out more about children and teenagers and the things that affect their lives, their schools, their families and their health. We do this to try and make the world a better place!

What is this research project all about?
I want to learn more about children who are taking lessons to learn a musical instrument. I want to find out how your *motivation and learning of *musical understanding works together so that you will hopefully enjoy music making and listening forever.

*Motivation: what makes you do something, and helps you to keep doing it.
*Musical understanding: understanding the music that you are making or listening to, and thinking about it while you are making it or listening to it.

Why have I been invited to take part in this research project?
You have been invited to take part because you are a primary school learner within grade four to seven, who takes individual (not with other children) lessons in a specific musical instrument.

Who is doing the research?
My name is Lisa-Mari Janse van Rensburg. I am a violin, piano and recorder teacher who is doing a Master's degree in Music Education at the Stellenbosch University. I would like to learn more about how you can be motivated in your learning, so that you can enjoy music forever!

What will happen to me in this study?
As part of this study, I will visit you and your teacher in two of your instrumental lessons. All you have to do is act as normally as you usually would in one of your lessons. I will also ask you to complete a few questions about how you experience your lessons and your teacher.

Can anything bad happen to me?
Nothing bad can happen to you. It may at first feel different and uncomfortable to have a strange person in your lesson, but I will only be there to describe what I see; not to say how good you are playing or practising. Your answers to the questionnaire questions will not be seen by your teacher or parents, so nothing bad will happen because of anything you say there. Do not be afraid to be honest!

Can anything good happen to me?
Nothing will really change; unfortunately you will get no reward for taking part, but it may help you to understand better how you like to learn your instrument and how you may enjoy your learning more. It may help other teachers in the future to make lessons more joyful to children!

Will anyone know I am in the study?
I will ask you to write your name on the question page, but no one else will know that you took part in the study. Eventually, you will be called for example "Student 1 of teacher A".

Who can I talk to about the study? If you have any questions about the study, you can contact me, Lisa-Mari Janse van Rensburg at 079 529 8290 / lisamarir10@gmail.com or Danell Herbst (my teacher in this study) at 079 219 4501 / danellherbst@sun.ac.za.

What if I do not want to do this?
You don't have to take part in this study, even if your parents agreed to it. You can stop at any point while completing the questions if you want to, without getting in trouble.

Do you understand this research study and are you willing to take part in it?

YES	NO

Has the researcher answered all your questions?

YES	NO

Do you understand that you can STOP being in the study at any time?

YES	NO

_____   _____

Signature of Child   Date

Appendix 2_Coding framework

Framework for SDT

Theme: Basic psychological needs	
Support	**Thwarting/Ignoring**
Subtheme: Competence	
Encourages growth	Emphasises fixed ability
	Doubts learner's capacity to improve
	Does not praise unless it is perfect
Measures ability and progress to learner's own previous achievement	Compares progress and achievement to other learners
Sets goals according to learner's current ability	Norm-referenced goals
Emphasises effort	Focuses on outcomes
Praises efforts	Emphasises shortcomings
Systematic approach	Lets learner struggle through big chunks, instead of helping to break down into manageable units
Teaches mindful practise strategies	
Manageable and/or optimal challenges	Challenges too difficult
	Offers no challenge
	Does not know how to do something
Acknowledges improvement	Ignores improvement
Positive feedback	No feedback
	Only negative feedback
Learner feels they are doing well	Learner feels they are not doing well
Teacher sets reasonable goals	Arbitrary goals
Relatedness	
Learner interacts	Minimal interaction
Teacher facilitates interaction	Teacher discourages anything that isn't directly a learning activity
Teacher listens to learner	
Takes interest in learner's activities	Not listening to learner
	Makes learner quiet
Acknowledge music being one of many activities	Upholds strict standards at all times
Teacher shows understanding	Doesn't accept any excuse for not practicing enough
	Teacher doesn't show understanding
	Induces guilt and shame
Praises efforts	
	Doesn't praise efforts
Supportive/caring language	Shows little or no care
Supportive/caring gestures	Ignores feelings/mood
Learner trusts teacher	Learner does not like teacher
Learner likes teacher	Learner does not trust teacher
Teacher is approachable	Teacher is being distant
Teacher warmth	Teacher does not return affection

Learner initiates affection Teacher returns affection	
Connects with friends through instrumental learning Connects with family through instrumental learning	Negative impact on relationship with family

Autonomy	
Codes: Provides rationales to activities	No rationales Rewards Punishments
Acknowledges feelings	Teacher doesn't acknowledge feelings
Acknowledges perspective Accepts negative feelings	Doesn't acknowledge perspective Invalidates negative feelings
Offers choice	Excludes learner from lesson plan Extensive rules
Encourages initiative Learner takes initiative	Teacher is over-involved Learner does not take initiative
Encourages/supports creativity	Disregards creative attempts
Fosters curiosity	Discourages inquisitiveness
Uses non-controlling language	Controlling language
Informative language	Intimidating language
Teacher focuses on learning process	Extensive focus on evaluations

Organismic Integration Theory			
External regulation	**Introjected regulation**	**Identified regulation**	**Integrated regulation**
Threats Punishments Rewards Learner rebels	Praise vs. disappointment from teacher Conditional regard Induces guilt and shame Learner has internal rewards Internal punishments Learner is ashamed	Competence and relatedness support Learner finds something personally important Learner sees the value in an activity Instrument/an aspect thereof contributes towards something else	Support for all three needs Instrument is part of identity Learner sees musical activity as congruent with their life goals

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Cognitive Evaluation Theory	
In support of intrinsic motivation	**Thwarting thereof/ignoring it**
Curious exploration by learner	Learner does not explore
Support of and opportunities for curious exploration	No opportunity for curious exploration
Challenge seeking behaviour	Avoiding/afraid of challenges
Manageable and/or optimal challenges	Challenges too difficult Offers no challenge
Learner shows enjoyment Learner shows interest	Learner is unhappy/indifferent
Teacher prioritises learner's enjoyment	Teacher does not prioritise learner's enjoyment
Learner feels relaxed while playing	Learner is feeling tense while playing
Teacher does not pressure learner	Teacher pressures learner Learner feels pressured
Support for all three needs (especially competence and autonomy)	Thwarting of one or more of the needs (especially competence and autonomy)

Framework for musical understanding

Theme: Musical understanding	
Positive	**Negative**
Sub-theme: Verbal musical thinking and knowing	
Verbal concepts are contextualised Verbal concepts supported by musical examples Discussions about musical works	Verbal concepts are verbal only No discussions about the musical works
Experiential musical thinking and knowing	
Facilitates problem finding Facilitates problem solving Teacher modelling Learner attentiveness Encourages learner to expand repertoire	Does not encourage learner to find problems Does not encourage learner to solve problems Teacher does not model
Situated musical thinking and knowing	
Know-how in a specific musical practice is taught Significance of the real-life context is acknowledged	A specific musical practice is not taught appropriately Teacher is uninformed of what a practice requires
Intuitive musical thinking and knowing	
Encourages expressive and creative judgements Guides learner in appropriate interpretation	Teacher forces own interpretation on learner There are no interpretations
Appreciative musical thinking and knowing	

Creative activities	Curious exploration is discouraged
Support of and opportunities for curious exploration	Learner does not explore
Curious exploration by learner	
Ethical musical thinking and knowing	
Historical and/or cultural context of musical works is acknowledged	Historical and/or cultural context is ignored
Discussion of context where relevant	Pieces with politically derogatory titles
	Pieces with age-inappropriate titles or lyrics for the learner
Supervisory musical thinking and knowing	
Learner acts appropriately under pressure	Learner does not act appropriately under pressure
Teacher allows learner to solve problems under pressure	Teacher intervenes too soon
Teacher helps learner to act appropriately under pressure	Creates images that are not music appropriate
Stimulates musical imagination	No goals are set
Creates appropriate musical images	Teacher does not provide mindful practise strategies
Helps to set musical goals	Learner does not practise mindfully
Teaches mindful practise strategies	
Procedural musical thinking and knowing	
Music making takes place	Teacher allows an opportunity for music making to pass by
Musical works approached in more than one dimensions	Musical works not approached in all/more than one dimensions
Critical reflection	No critical reflection
Makes learner aware of actions	Does not make student aware of actions
Discusses efforts	Efforts are not discussed
	Unmusical ways of learning

Appendix 3.1_Questionnaire example

L E A R N E R   Q U E S T I O N N A I R E

Name _____   **Age** ____   **Grade in school**   ____

Years of doing music ____   **Years of playing my instrument** ____

QUESTIONNAIRE 1

Questions about....

...why I play my instrument well...

...why I practise my instrument at home...

...why I work together in lessons...

...why I try hard on difficult pieces or exercises...

A. Why do I **try to play** my instrument **well**?

In **general** I try to play my instrument well...				
1. ...because I **enjoy** doing it.	Always	Most of the time	Sometimes	Never
2. ...so my **teacher** will **think I'm good** at my instrument.	Always	Most of the time	Sometimes	Never
3. ...because it's **important** for me to do.	Always	Most of the time	Sometimes	Never
4. ...because I will feel really **proud** of myself if I do.	Always	Most of the time	Sometimes	Never
5. ...because I might be **rewarded** if I do.	Always	Most of the time	Sometimes	Never
6. ...because that's what I'm **supposed** to do.	Always	Most of the time	Sometimes	Never
7. ...because **I'll feel** really **bad** about myself if I don't.	Always	Most of the time	Sometimes	Never

Because in my **lessons...**				
8. ...I **enjoy playing** well.	Always	Most of the time	Sometimes	Never
9. ...**I'll feel** really **bad** about myself if I don't play well.	Always	Most of the time	Sometimes	Never
10. ...it's **important** for me to try to play well.	Always	Most of the time	Sometimes	Never
11. ...I will feel really **proud** of myself if I play well.	Always	Most of the time	Sometimes	Never
12. ...I might be **rewarded** if I play well.	Always	Most of the time	Sometimes	Never

Because I will **get in trouble** with my....				
13. ...**teacher** if I don't play well.	Always	Most of the time	Sometimes	Never
14. ...**parents** if I don't play well.	Always	Most of the time	Sometimes	Never

B. Why do **I practise** my instrument **at home**?

1. Because I want my **teacher to think I am a good learner**.	Always	Most of the time	Sometimes	Never

Because I'll **get in trouble...**				
2. ...with my **teacher** if I don't.	Always	Most of the time	Sometimes	Never
3. ... with my **parents** if I don't.	Always	Most of the time	Sometimes	Never

Because it is **fun...**				
4. ...playing my **instrument**.	Always	Most of the time	Sometimes	Never
5. ...playing my **pieces**.	Always	Most of the time	Sometimes	Never
6. ...playing my **scales and other exercises**.	Always	Most of the time	Sometimes	Never

7. Because I will **feel bad about myself** if I don't do it.	Always	Most of the time	Sometimes	Never

8. Because I want to **get better** at my instrument.	Always	Most of the time	Sometimes	Never

9. Because I want to **know** my instrument better.	Always	Most of the time	Sometimes	Never

10. Because that's what I'm **supposed** to do.	Always	Most of the time	Sometimes	Never

Because I enjoy **practising...**				
11. ...my **instrument**.	Always	Most of the time	Sometimes	Never
12. ...my **pieces**.	Always	Most of the time	Sometimes	Never
13. ...my **scales and technical exercises**.	Always	Most of the time	Sometimes	Never

14. Because it's **important** to me to practise.	Always	Most of the time	Sometimes	Never

C. Why do I **work together** during my **lessons?**

1. Because **my lessons** are fun.	Always	Most of the time	Sometimes	Never

So that **my teacher...**				
2. ...won't **yell** at me.	Always	Most of the time	Sometimes	Never
3. ...won't get **impatient**.	Always	Most of the time	Sometimes	Never

4. Because I want my **teacher to think I'm a good learner**.	Always	Most of the time	Sometimes	Never

5. Because I want to **learn** new things.	Always	Most of the time	Sometimes	Never

6. Because I'll be **ashamed of myself** if I couldn't get something in my lesson right.	Always	Most of the time	Sometimes	Never

7. Because **my teacher** is **fun**.	Always	Most of the time	Sometimes	Never

8. Because **playing my instrument** is **fun**.	Always	Most of the time	Sometimes	Never

Because they said it's the **rule**:				
9. my **parents**	Always	Most of the time	Sometimes	Never
10. my **teacher**	Always	Most of the time	Sometimes	Never

11. Because **I know** that's **the rule** in a class.	Always	Most of the time	Sometimes	Never

Because I enjoy...				
12. ...**participating** in my lessons.	Always	Most of the time	Sometimes	Never
13. ...**playing** for my teacher.	Always	Most of the time	Sometimes	Never

14. Because it's **important** to me to **work together** in my lessons.	Always	Most of the time	Sometimes	Never

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D. Why do **I try hard** on difficult pieces or exercises?

	Always	Most of the time	Sometimes	Never
1. Because I want my **teacher to think that I'm good at my instrument**.	Always	Most of the time	Sometimes	Never

	Always	Most of the time	Sometimes	Never
2. Because I feel **ashamed of myself** when I don't try.	Always	Most of the time	Sometimes	Never

	Always	Most of the time	Sometimes	Never
3. Because I **enjoy** difficult pieces and exercises.	Always	Most of the time	Sometimes	Never

	Always	Most of the time	Sometimes	Never
4. Because that's what I'm **supposed** to do.	Always	Most of the time	Sometimes	Never

	Always	Most of the time	Sometimes	Never
5. To see what **I** can do on my instrument.	Always	Most of the time	Sometimes	Never

	Always	Most of the time	Sometimes	Never
6. To get feedback from **my teacher** on how I am progressing.	Always	Most of the time	Sometimes	Never

To find out if I am...

	Always	Most of the time	Sometimes	Never
7. **...playing** well.	Always	Most of the time	Sometimes	Never
8. **...progressing** well.	Always	Most of the time	Sometimes	Never

Because difficult pieces or exercises are...

	Always	Most of the time	Sometimes	Never
9. **...fun** to learn	Always	Most of the time	Sometimes	Never
10. **...important** to me to try	Always	Most of the time	Sometimes	Never

	Always	Most of the time	Sometimes	Never
11. Because I want **my teacher** to **compliment** me on my playing.	Always	Most of the time	Sometimes	Never

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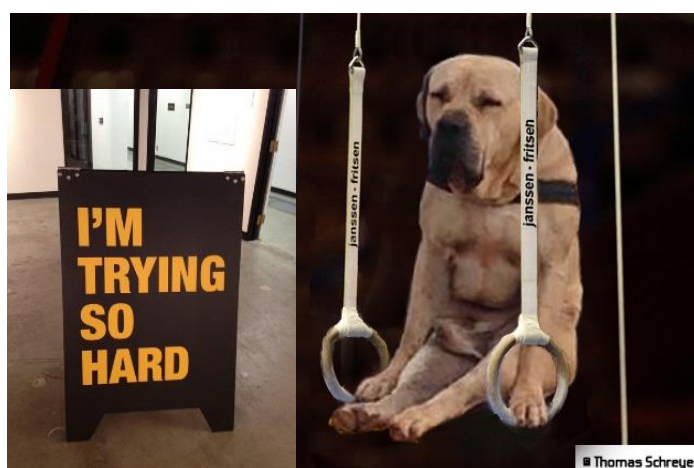
QUESTIONNAIRE 2

Questions about....

...playing my instrument...   ...my lessons...
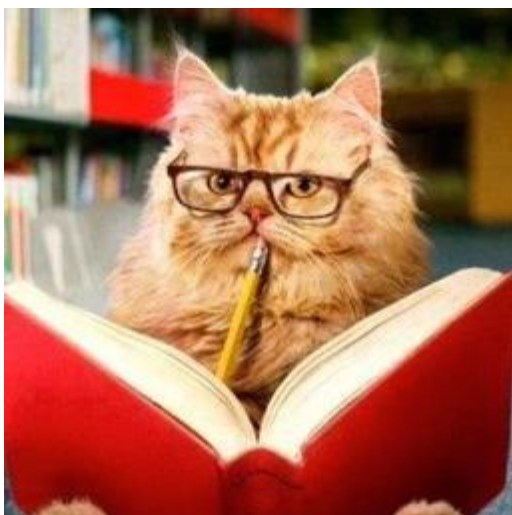

...practising...   ...playing in front of people...

...my instrumental teacher...

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Section A: **Playing My Instrument**

1. …I enjoy it very much	Always	Most of the time	Sometimes	Never
2. …is fun	Always	Most of the time	Sometimes	Never
3. …is very interesting	Always	Most of the time	Sometimes	Never
4. …is enjoyable	Always	Most of the time	Sometimes	Never
5. …I think I am doing pretty well at it, compared to other students	Always	Most of the time	Sometimes	Never
6. …I think about how much I enjoy it	Always	Most of the time	Sometimes	Never
7. …I think I am pretty good at it	Always	Most of the time	Sometimes	Never
8. …after a while, I feel pretty good at it	Always	Most of the time	Sometimes	Never
9. …I am satisfied with my performance	Always	Most of the time	Sometimes	Never
10. …I am pretty skilled at it	Always	Most of the time	Sometimes	Never
11. …I am anxious while playing	Always	Most of the time	Sometimes	Never
12. …I feel very tense while playing	Always	Most of the time	Sometimes	Never
13. …I feel pressured to learn it	Always	Most of the time	Sometimes	Never
14. …I believe I have some choice about learning it	Always	Most of the time	Sometimes	Never
15. …I am learning this because I want to	Always	Most of the time	Sometimes	Never

Section B: **My Lessons**

	Always	Most of the time	Sometimes	Never
1. I enjoy my instrumental lessons very much.	Always	Most of the time	Sometimes	Never
2. Taking instrumental lessons is fun.	Always	Most of the time	Sometimes	Never
3. I would describe my instrumental lessons as very interesting.	Always	Most of the time	Sometimes	Never
4. My instrumental lessons are enjoyable.	Always	Most of the time	Sometimes	Never
5. While I am in a lesson, I think about how much I enjoy it.	Always	Most of the time	Sometimes	Never
6. I think I am pretty good in my lessons.	Always	Most of the time	Sometimes	Never
7. I think I am doing well in my lessons, compared to other students.	Always	Most of the time	Sometimes	Never
8. After a while in my lesson, I feel pretty competent.	Always	Most of the time	Sometimes	Never
9. I am satisfied with my performance in my lessons.	Always	Most of the time	Sometimes	Never
10. I feel very tense while having a lesson.	Always	Most of the time	Sometimes	Never
11. I am anxious while having a lesson.	Always	Most of the time	Sometimes	Never
12. I feel pressured to practise for my lessons.	Always	Most of the time	Sometimes	Never
13. I believe I have some choice about the pieces I am playing.	Always	Most of the time	Sometimes	Never

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Section C: **Practising**

	Always	Most of the time	Sometimes	Never
1. I enjoy practising my instrument very much.	Always	Most of the time	Sometimes	Never
2. Practising my instrument is fun.	Always	Most of the time	Sometimes	Never
3. I would describe practising my instrument as very interesting.	Always	Most of the time	Sometimes	Never
4. After having practised for a while, I feel pretty competent.	Always	Most of the time	Sometimes	Never
5. I am practising my instrument because I want to.	Always	Most of the time	Sometimes	Never

Section D: **Playing in front of People**

	Always	Most of the time	Sometimes	Never
1. I feel very tense when playing in front of people.	Always	Most of the time	Sometimes	Never
2. I am anxious when playing in front of other people.	Always	Most of the time	Sometimes	Never
3. I feel pressured to play in front of other people.	Always	Most of the time	Sometimes	Never
4. I believe I have some choice about whether to play in front of people.	Always	Most of the time	Sometimes	Never
5. When I play in front of people, it's because I want to.	Always	Most of the time	Sometimes	Never

Section E: **My Instrumental Teacher**

	Always	Most of the time	Sometimes	Never
1. I like to interact with my teacher.	Always	Most of the time	Sometimes	Never
2. I feel like I can really trust my teacher.	Always	Most of the time	Sometimes	Never
3. My teacher feels like a friend.	Always	Most of the time	Sometimes	Never
4. I feel close to my teacher.	Always	Most of the time	Sometimes	Never

QUESTIONNAIRE 3

In my instrumental learning…

1. I feel a sense of choice and freedom in what I do.	Always	Most of the time	Sometimes	Never
2. I feel confident that I can play my instrument well.	Always	Most of the time	Sometimes	Never
3. I feel that my decision to learn my instrument is what I really want.	Always	Most of the time	Sometimes	Never
4. I feel capable at playing my instrument.	Always	Most of the time	Sometimes	Never
5. I feel that my choice to learn my instrument expresses who I really am.	Always	Most of the time	Sometimes	Never
6. I feel competent to achieve my goals.	Always	Most of the time	Sometimes	Never
7. I feel my instrumental learning and playing really interests me.	Always	Most of the time	Sometimes	Never
8. I feel I can successfully master challenges that my instrumental learning offers.	Always	Most of the time	Sometimes	Never
9. I feel close and connected to my teacher.	Always	Most of the time	Sometimes	Never
10. I experience a warm feeling with my teacher.	Always	Most of the time	Sometimes	Never
11. I like my teacher, and I feel that my teacher cares about me.	Always	Most of the time	Sometimes	Never

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QUESTIONNAIRE 4

When I think about my **instrument**, I feel like this:
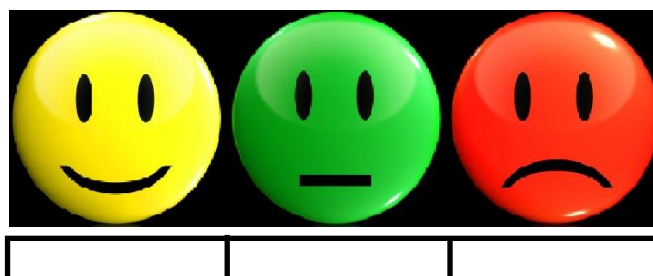
1.1.1 Comments:

_____

_____

_____

1.2.1 Things **I enjoy most** about playing my instrument:

_____

_____

_____

1.2.2 Why?

_____

_____

_____

1.2.3 Things **I enjoy least** about playing my instrument:

_____

_____

_____

1.2.4 Why?

_____

_____

_____

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When I think about my **lessons**, I feel like this:
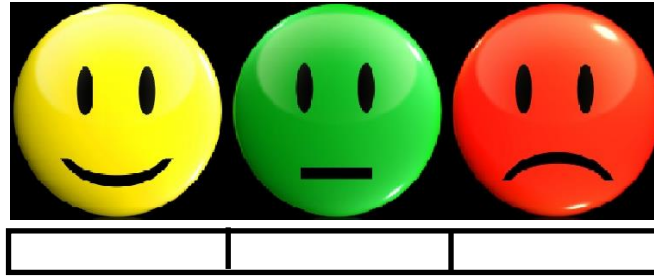
2.1.1 Comments:

_____

_____

_____

2.2 Things **I enjoy the least** in my lessons:

_____

_____

_____

2.2.1 Why?

_____

_____

_____

2.2.2 Things **I enjoy the most** in my lessons:

_____

_____

_____

2.2.3 Why?

_____

_____

_____

When I think about **my teacher**, I feel like this:
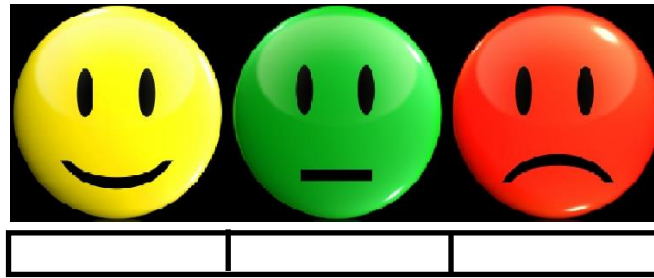
3.1.1 Comments:

_____

_____

_____

3.2.1 Things **I like the least** about my teacher:

_____

_____

_____

3.2.2 Why?

_____

_____

_____

3.2.3 Things **I like the most** about my teacher:

_____

_____

_____

3.2.4 Why?

_____

_____

_____

When I **practise** my instrument, I usually feel like this:
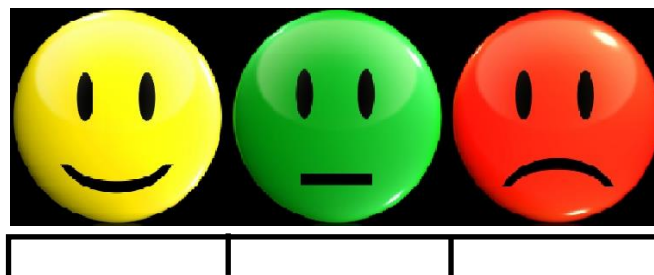
4.1.1 Comments:

_____

_____

_____

4.2.1 Things I **enjoy the least** about practising:

_____

_____

_____

4.2.2 Why?

_____

_____

_____

4.2.3 Things **I enjoy the most** about practising:

_____

_____

_____

4.2.4 Why?

_____

_____

_____

You are finished!   **Thank you!**

Appendix 3.2_Subscales explained

Questionnaire 1 (SRQ)

A. Why do I try to play my instrument well?

In **general** I try to play my instrument well...	1. ...because I enjoy **enjoy** doing it.
	2. ...so my **teacher** will think **I'm good** at my instrument.
	3. ...because it's **important** for me to do.
	4. ...because I will feel really **proud** of myself if I do.
	5. ...because I might be **rewarded** if I do.
	6. ...because that's what I'm **supposed** to do.
	7. ...because **I'll feel** really **bad** about myself if I don't.
Because in my **lessons...**	8. ...I **enjoy playing** well.
	9. ...**I'll feel** really **bad** about myself if I don't play well.
	10. ...it's **important** for me to try to play well.
	11. ...I will feel really **proud** of myself if I play well.
	12. ...I might be **rewarded** if I play well.
Because I will **get in trouble** with my...	13. ...**teacher** if I don't play well.
	14. ...**parents** if I don't play well.

B. Why do I practice my instrument at home?

Because I'll **get in trouble**..	1. Because I want my **teacher to think I am a good learner.**
	2. ...with my **teacher** if I don't.
	3. ...with my **parents** if I don't.
Because it is **fun...**	4. ...playing my instrument.
	5. ...playing my **pieces.**
	6. ...playing my **scales and other exercises.**
	7. Because I will **feel bad about myself** If I don't do it.
	8. Because I want to **get better** at my instrument.
	9. Because I want to **know** my instrument better.
	10. Because that's what I'm **supposed** to do.
Because I enjoy **practising...**	11. ...my **instrument**
	12. ...my **pieces.**
	13. ...my **scales and technical exercises**
	14. Because it's **important** to me to practise.

C. Why do I work together during my lessons?

So that **my teacher...**	1. Because my **lessons** are fun.
	2. ...won't **yell** at me.
	3. ...won't get **impatient**
	4. Because I want my **teacher to think I'm a good learner**
	5. Because I want to **learn** new things.
	6. Because I'll be **ashamed of myself** if I couldn't get something in my lesson right.
	7. Because my **teacher** is fun.
	8. Because **playing my instrument** is fun.
Because they said it's the **rule:**	9. my **parents**
	10. my **teacher**
	11. Because I **know** that's **the rule** in a class.
Because I enjoy...	12. ...**participating** in my lessons.
	13. ...**playing** for my teacher.
	14. Because it's **important** to me to **work together** in my lessons.

D. Why do I try hard on difficult pieces or exercises?

	1. Because I want my **teacher to think that I'm good at my instrument.**
	2. Because I feel **ashamed of myself** when I don't try.
	3. Because **I enjoy** difficult pieces and exercises.
	4. Because that's what I'm **supposed** to do.
	5. To see what **I can do** on my instrument.
	6. To get feedback from **my teacher** on how I am progressing.
	7. ...**playing** well.
To find out if I am...	8. ...**progressing** well.
Because difficult pieces of exercises are:	9. ...**fun** to learn
	10. **important** to me to try
	11. Because I want **my teacher** to **compliment** me on my playing.

Subscales:

Section A
- ➢ Intrinsic motivation: 1, 8
- ➢ External regulation: 5, 6, 12, 13, 14
- ➢ Introjection: 2, 4, 7, 9, 11
- ➢ Identification: 3, 10

Section B
- ➢ Intrinsic motivation: 4, 5, 6, 11, 12, 13
- ➢ External regulation: 2, 3, 10
- ➢ Introjection: 1, 7
- ➢ Identification: 8, 9, 14

Section C
- ➢ Intrinsic motivation: 1, 7, 8, 12, 13
- ➢ External regulation: 2, 3, 9, 10, 11
- ➢ Introjection: 4, 6
- ➢ Identification: 5, 14

Section D
- ➢ Intrinsic motivation: 3, 9
- ➢ External regulation: 4, 11
- ➢ Introjection: 1, 2
- ➢ Identification: 5, 6, 7, 8, 10

Questionnaire 2 (CET)

A. Playing my instrument

1. ...I enjoy it very much
2. ...is fun
3. ...is very interesting
4. ...is enjoyable
5. ...I think I am doing pretty well at it, compared to other students
6. ...I think about how much I enjoy it
7. ...I think I am pretty good at it
8. ...after a while, I feel pretty good at it
9. ...I am satisfied with my performance
10. ...I am pretty skilled at it
11. ...I am anxious while playing
12. ... I feel very tense while playing
13. ...I feel pressured to learn it
14. ...I believe I have some choice about learning it
15. ...I am learning this because I want to

B. My lessons

1. I enjoy my instrumental lessons very much.
2. Taking instrumental lessons is fun.
3. I would describe my instrumental lessons as very interesting.
4. My instrumental lessons are enjoyable.
5. While I am in a lesson, I think about how much I enjoy it.
6. I think I am pretty good in my lessons.
7. I think I am doing pretty well in my lessons, compared to other students.
8. After a while in my lesson, I feel pretty competent.
9. I am satisfied with my performance in my lessons.
10. I feel very tense while having a lesson.
11. I am anxious while having a lesson.
12. I feel pressured to practise for my lessons.
13. I believe I have some choice about the pieces I am playing.

C. Practising

1. I enjoy practising my instrument very much.
2. Practising my instrument is fun.
3. I would describe practising my instrument as very interesting.
4. After having practised for a while, I feel pretty competent.
5. I am practising my instrument because I want to.

D. Playing in front of people

1. I feel very tense when playing in front of other people.
2. I am anxious when playing in front of other people.
3. I feel pressured to play in front of people.
4. I believe I have some choice about whether to play in front of people.
5. When I play in front of people, it's because I want to.

E. My instrumental teacher

1. I like to interact with my teacher.
2. I feel like I can really trust my teacher.
3. My teacher feels like a friend.
4. I feel close to my teacher.

Subscales:

Section A
- ➢ Interest/Enjoyment: 1, 2, 3, 4, 6
- ➢ Pressure/Tension: 11, 12, 13
- ➢ Competence: 5, 7, 8, 9, 10
- ➢ Autonomy: 14, 15

Section B
- ➢ Interest/Enjoyment: 1, 2, 3, 4, 5
- ➢ Pressure/Tension: 10, 11, 12
- ➢ Competence: 6, 7, 8, 9
- ➢ Autonomy: 13

Section C
- ➢ Interest/Enjoyment: 1, 2, 3
- ➢ Competence: 4
- ➢ Autonomy: 5

Section D
- ➢ Pressure/Tension: 1, 2, 3
- ➢ Autonomy: 4, 5

Section E
- ➢ Relatedness: 1, 2, 3, 4

Questionnaire 3 (BPNS)

In my instrumental learning...

1. I feel a sense of choice and freedom in what I do.

2. I feel confident that I can play my instrument well.

3. I feel that my decision to learn my instrument is what I really want.

4. I feel capable at playing my instrument.

5. I feel that my choice to learn my intrument expresses who I really am.

6. I feel competent to achieve my goals.

7. I feel my instrumental learning and playing really interests me.

8. I feel can successfully master challenges that my instrumental learning offers.

9. I feel close and connected to my teacher.

10. I expierience a warm feeling with my teacher.

11. I like my teacher, and I feel that my teacher cares about me.

Subscales:
Competence: 2, 4, 6, 8
Relatedness: 9, 10, 11
Autonomy: 1, 3, 5, 7

Appendix 4_Pilot study

Pilot study

A pilot study was conducted before the real and final data collection process commenced. This was done so that the researcher could determine the best procedures of collecting data to gain the most insightful and authentic results. After determining this, the final data collection procedures were modified accordingly. The pilot study was conducted at two primary schools in the Western Cape: five teachers at the one school and two at the other school. The amount of learners per teacher varied between two and seven, which made the researcher decide to have at least five learners per teacher in the final collection – statistically this would provide better results than two learners per teacher. The learners were between grade three and seven in the school; after completion it was changed to grade four to seven, due to learners' abilities to complete a questionnaire. The researcher decided on primary school learners, as it is important in those early years that the foundation of musical understanding is laid and that pupils should be motivated to continue to pursue music in later years. For the data collected at one of the schools, the head of the music department (HOD) was asked for permission, and provided information of the music teachers' timetables. The sample of children was selected according to their ages, and the days of the week that they had their lessons, as the researcher decided on a certain observation schedule. Initially, eight pupils per teacher were selected, to provide for pupils whose parents would not give consent for their participation, or questionnaires completed wrong. At the other school, permission was requested by a music teacher from the headmaster, who granted permission. The teacher sent the consent forms home with the pupils of two teachers, including that teacher. The teacher also sent reminder letters home to ensure maximal response. In total, 12 pupils returned it, granting permission to participate. The same procedures were followed in the pilot study as in the final collection, but more visits were made to the same schools to observe enough learners (as it wasn't planned thoroughly in advance), and questionnaires were sent home with learners at the one school. These aspects were modified, as the trips were planned thoroughly in the final round, and questionnaires had to be completed at school under the researcher's supervision. The latter was decided to eliminate possible parental and teacher influences in the questionnaire answers, which would make it impossible to be certain of its authenticity.

The different aspects of the lessons were examined in the following ways:

Lesson observations

Individual instrumental lessons were observed and video recorded. A video recorder was used for this task. Not much care was taken to get a good image, but rather to capture the sound (spoken words, playing, etc.).

The analysis aimed to assess the teachers' support for autonomy, relatedness and competence of the learners, as well as to which extent the cultivation of musical understanding is taking place. This can be

measured by an assessment of the knowledges of musicianship at work during the lesson, and whether the overall emphasis is on music making.

Questionnaires

Standardised questionnaires found on the SDT website were completed by all the learners who were observed. Three different questionnaires were taken and adapted according to an individual instrumental setting: the *Basic Psychological Needs Scales (BPNS)* (addressing fulfilment of the basic psychological needs), the *Self-regulation Questionnaire (SRQ)* (addressing OIT), and the *Intrinsic Motivation Inventory (IMI)* (addressing intrinsic motivation). The standardised IMI and BPNS contains a seven-item scale, and each question has to be rated according to it. The SRQ however has a version which is more suitable for children, as it contains a four-item scale, and the most applicable answer has to be circled by the participant, instead of written in. This format was adapted for the *IMI* and the *BPNS* too for the purposes of the study. A fourth questionnaire, a qualitative one designed by the researcher, was also added. This questionnaire was aimed at learners' self-reported enjoyment of the different aspects of their instrumental learning.

More specifically, each questionnaire was chosen for the following reasons:

- BPNS examines the three basic psychological needs' fulfilment, which is fundamental for the support of any mini-theory.

- SRQ examines OIT, and was chosen to measure the learners' different levels of extrinsic motivation against the continuum of internalisation. This was deemed important in SDT support, as learners have to internalise the less intrinsically motivated aspects of instrumental learning. They have to regulate their own learning process if they are to enjoy music lifelong.

- IMI was selected, as many learners probably have a certain amount of intrinsic motivation to pursue the instrument that they are learning. It is thus important that the learning conditions do not undermine this intrinsic motivation, which may be seen as the basis of musical enjoyment.

Questions within the questionnaires were grouped according to topics relevant to individual instrumental learning. Suitable pictures were selected for each topic to make the questionnaires child friendly. Some questions were expanded according to different aspects of instrumental learning, for example in the *SRQ*, the question aimed at external regulation (getting into trouble) were divided into two questions: "…in trouble with my teacher…" and "…in trouble with my parents…".

- In the adapted *SRQ*, the topics or main questions were:
  - ➤ Why do I try to play my instrument well? (originally Why do I try to do well in school?),
  - ➤ Why do I practise my instrument at home? (originally Why do I do my homework?),

> ➤ Why do I co-operate during my lessons? (originally Why do I work on my classwork?) and

> ➤ Why do I try hard on difficult pieces or exercises? (originally Why do I try to answer hard questions in class?).

- In the adapted *IMI* the topics were:
  - ➤ Playing my instrument,
  - ➤ My lessons,
  - ➤ Practising,
  - ➤ Playing in front of people and
  - ➤ My instrumental teacher.

- The *BPNS* was just made specific to instrumental learning; the questions were introduced by the sentence *In my instrumental learning.*

- In the fourth questionnaire (qualitative), questions were also grouped according to one's instrument, one's lessons, one's teacher and practising. Each topic as listed here had to be rated by ticking the face that fits the best: happy, neutral or sad. There was an opportunity to comment on the answer, and to elaborate on what one enjoys most and least of each topic, and why. The questions were stated as follows:

  - ➤ When I think about my [instrument / lessons / teacher / practising], I feel like this: (three faces to choose from)
  - ➤ Comments…
  - ➤ Things I **enjoy /like the least** about [my instrument / my lessons / my teacher / practising]…
  - ➤ Why?
  - ➤ Things **I enjoy / like the most** about [my instrument / my lessons / my teacher / practising]…
  - ➤ Why?

Learners took the questionnaires home, which caused them to misunderstand how to complete it, and only a few were returned to their teachers and to the researcher. There was also proof that one of the teachers completed the questionnaires for all that teacher's learners, as the handwriting and pencil looked the same, and as through statistical analysis, there were no or very little deviation between learners' results. The researcher also found that parents and teachers were reluctant to help learners with English questionnaires (they demanded Afrikaans ones), and complained about the length. This caused the researcher to provide Afrikaans questionnaires (through own translation) to those who requested it. The length remained the same.

At the other school, learners completed the questionnaires in school time under the researcher's supervision, which ensured a 100 percent return rate of questionnaires. This time, Afrikaans questionnaires were offered right from the start. There were however many contradictory results

within learners, which may indicate that they lost concentration due to the length of the questionnaire, or possibly questions that they didn't understand due to the use of words like competent. It was especially observed by the researcher that the Afrikaans learners had more difficulty with language use than the English learners.

On return of the questionnaires, the researcher found that some learners chose two answers at some of the questions; probably because they couldn't decide which answer was the truest for them. This posed a statistical problem, as only one answer per question can be entered into Microsoft Excel for score calculation.